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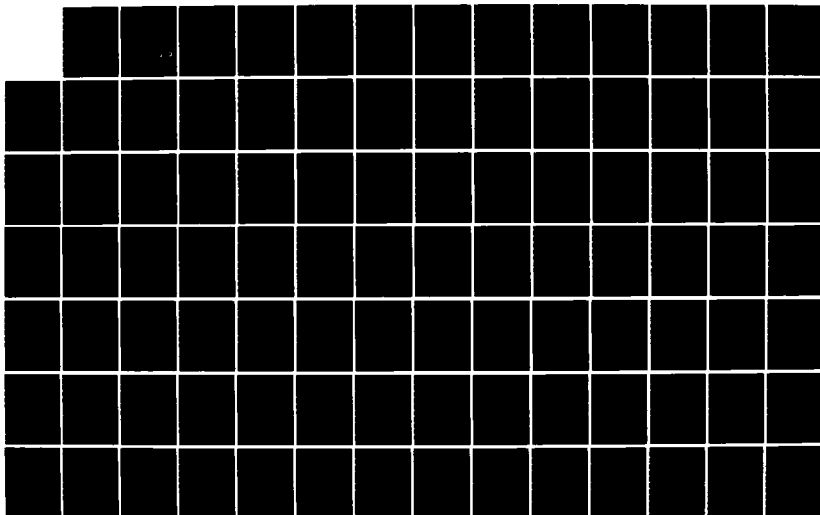
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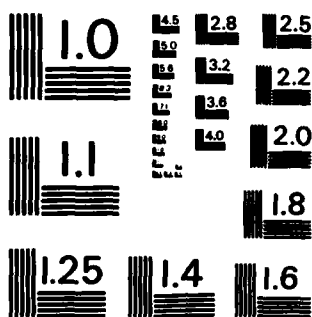
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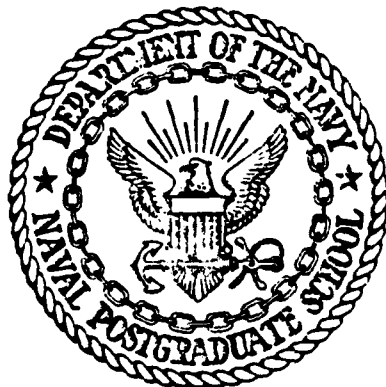
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# NAVAL POSTGRADUATE SCHOOL

Monterey, California

AD-A147 610



## THESIS

INTERNAL ADMINISTRATIVE CONTROL:  
ITS APPLICABILITY TO THE MARINE CORPS

by

Christina F. Illig

and

Harry G. Rudge

June 1984

Thesis Co-advisors:

J.F. Mullane Jr.  
J.G. SanMiguel

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REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM	
1. REPORT NUMBER	2. GOVT ACCESSION NO.	RECIPIENT'S CATALOG NUMBER	
AD-A147610			
4. TITLE (and Subtitle) INTERNAL ADMINISTRATIVE CONTROL: ITS APPLICABILITY TO THE MARINE CORPS		5. TYPE OF REPORT & PERIOD COVERED Master's Thesis June 1984	
		6. PERFORMING ORG. REPORT NUMBER	
7. AUTHOR(s) Christina F. Illig Harry G. Rudge		8. CONTRACT OR GRANT NUMBER(s)	
9. PERFORMING ORGANIZATION NAME AND ADDRESS Naval Postgraduate School Monterey, California 93943		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS	
11. CONTROLLING OFFICE NAME AND ADDRESS Naval Postgraduate School Monterey, California 93943		12. REPORT DATE June 1984	
		13. NUMBER OF PAGES 164	
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		15. SECURITY CLASS. (of this report) Unclassified	
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE	
16. DISTRIBUTION STATEMENT (of this Report)  Approved for public release; distribution unlimited.			
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)			
18. SUPPLEMENTARY NOTES			
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)  Internal Control Internal Administrative Control Administrative Control			
20. ABSTRACT (Continue on reverse side if necessary and identify by block number)  The thesis presents a theoretical development of a definition of administrative control and its applicability to the Marine Corps. The authors conclude that: (1) administrative controls are those predetermined controls that give purpose, direction, and meaning to an organization; (2) administrative controls are reflected in three dimensions: first, as organizational controls; second, as operating			

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SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

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**Internal Administrative Control:  
Its Applicability to the Marine Corps**

by

Christina F. Illig  
Lieutenant Commander, United States Navy  
E.A., Saint Bonaventure University, 1972

and

Harry G. Rudge  
Major, United States Marine Corps  
E.A., Slippery Rock State College, 1968  
M.A., Western Michigan University, 1976

Submitted in partial fulfillment of the  
requirements for the degree of

MASTER OF SCIENCE IN MANAGEMENT

from the

NAVAL POSTGRADUATE SCHOOL  
June 1984

Authors:

Christina F. Illig

Harry G. Rudge

Approved by:

Joseph S. Mullen

Thesis Co-Advisor

Joseph G. Lee Maguire

Thesis Co-Advisor

Richard L. Elster

Chairman, Department of Administrative Science

Kenneth T. Marshall

Dean of Information and Policy Sciences

## ABSTRACT

↳ This

The thesis presents a theoretical development of a definition of administrative control and its applicability to the Marine Corps. The authors conclude that: (1) administrative controls are those predetermined controls that give purpose, direction, and meaning to an organization; (2) administrative controls are reflected in three dimensions: first, as organization controls; second, as operating controls; and, third, as information system controls; and (3) administrative controls are inseparable from management controls. The authors recommend: (1) expanding command/management input in the design of management information systems to improve their effectiveness; (2) increasing tour lengths for commanding officers to permit the effective implementation and operation of a management control program; (3) courses of instruction for all managers at all levels; and, (4) procedures be developed to ensure the positive participation of senior management in creating a positive control environment. ↗

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## I. INTRODUCTION

### A. PURPOSE

Since the inception of officially recognized internal control systems, there has been difficulty in segregating and defining internal administrative controls from internal accounting controls. Because of the familiarity with accounting control and the relative ease with which the lack of this control can be quantified, both civilian managers and military commanders have continued to emphasize its importance. This overshadowing of administrative control has resulted at the outset from the independent auditing profession's insistence that the aggregate of administrative controls do not impact on the fair presentation of financial statements. This lack of concern for the administrative control process has carried over into the Federal Government until recent times. As a result of the renewed emphasis placed on both internal accounting and internal administrative controls, the existing definition and associated guidance must be expanded to take into account the increased size, diversity, and complexity of organizations which must now implement administrative control systems. The purpose of this thesis is to develop an operational definition of internal administrative control relative to the Marine Corps and to clarify and initiate guidance and techniques for use by commanders in the implementation of these systems.

### B. SCOPE AND METHODOLOGY

This thesis will provide a definition of the phrase "internal administrative control", currently utilized by the Federal Government in its effort to improve efficiency and

effectiveness in government agencies, and reduce the incidence of waste, fraud and abuse. The phrase will be operationalized for the Marine Corps to assist commanders/managers at all levels of the organization in implementing internal control programs.

The historical development of the phrase "internal administrative control" (from the American Institute of Certified Public Accountants (AICPA) and the independent auditor in the private sector to the issuance of Office of Management and Budget (OMB) Circular A-123 and the passage of the Federal Manager's Financial Integrity Act and its impact on the public sector) lays the groundwork for the analysis of the nature of control and the concept of management control. These concepts are important factors in the definitional development of "internal administrative control" as the structure and process of organization. These elements will be discussed utilizing Mintzberg's model as developed in his text, The Structuring of Organizations. Models developed by Dalton and Hopwood establishing the types of organizational controls, and the theoretical framework of Anthony's Planning and Control System in conjunction with Mautz's research entitled Internal Control in U.S. Corporations: The State of the Art will refine the discussion of control and management control to internal administrative control.

The resultant definition will be operationalized for application in the Marine Corps by translating the academic theory and concepts into a practical form for use by the Marine Corps in today's public sector control environment. Some techniques and methodologies for implementing "internal administrative control" systems will also be developed.

The research consisted mainly of a literary search in the areas of control, management control, and internal

control. The operationalizing of the definition was accomplished through a review of Marine Corps activities' directives on the subject, analysis of a subsequent questionnaire completed by personnel responsible for system implementation at the Marine Corps activity level, and the transformation of theoretical concept into practical application. The questionnaire is provided as Appendix B. An executive summary is provided as Appendix H.

## II. HISTORICAL DEVELOPMENT OF INTERNAL ADMINISTRATIVE CONTROL

### A. EVOLUTION IN THE PRIVATE SECTOR

Neither the concern over internal control in both the private or public sectors, nor the difficulty in determining the substance surrounding the definition of internal administrative control are new issues. The American Institute of Certified Public Accountants (AICPA) codified ten Generally Accepted Auditing Standards in 1973. This codification resulted in Statement of Auditing Standard (SAS) 1 which levied responsibility on the independent auditor to review the accumulated evidence in accordance with generally accepted auditing standards and to issue an unbiased opinion on the fair presentation of the financial statements of the business firm. One of the ten standards states:

There is to be a proper study and evaluation of the existing internal control as a basis for reliance thereon and for the determination of the resultant extent of the tests to which auditing procedures are to be restricted. [Ref. 1]

The promulgation of SAS 1 was the culmination of a long standing disagreement within the auditing profession over the definition of internal control and its applicability to the independent auditor. The AICPA formally adopted the following definition of internal control in 1949 as:

Internal control comprises the plan of organization and all the coordinate methods and measures adapted within a business to safeguard its assets, check the accuracy and reliability of its accounting data, promote operational efficiency, and encourage adherence to prescribed managerial policies. [Ref. 2]

Considered to be too broad a definition for auditing purposes, the AICPA further refined the definition to accounting controls and administrative controls, and in 1958 published the following:

Internal control, in the broad sense, includes: control which may be characterized as either accounting or administrative as follows:

Accounting controls comprise the plan of organization and all the methods and procedures that are concerned mainly with, and relate directly to, the safeguarding of assets and the reliability of financial records. They generally include such controls as the systems of authorization and approval, separation of duties concerned with record keeping and accounting reports from those concerned with operations or asset custody, physical controls over assets, and internal auditing.

Administrative controls comprise the plan of organization of all the methods and procedures that are concerned mainly with operational efficiency and adherence to managerial policies and usually relate only indirectly to the financial records. They generally include such controls as statistical analysis, time and motion studies, performance reports, employee training programs, and quality controls. [Ref. 3]

The scope of the independent auditor's responsibility was limited to the evaluation of internal accounting controls and the profession continued to practice this narrower concept despite warnings from both internal and external sources. As a result of numerous legal cases which found deficiencies in the independent auditor's evaluation of management control, the AICPA issued a clarification of the two types of internal control in 1972:

Administrative control includes, but is not limited to, the plan of organization and the procedures and records that are concerned with the decision processes leading to management's authorization of transactions. Such authorization is a management function directly associated with the responsibility for achieving the objectives of the organization and is the starting point for establishing accounting control of transactions.

Accounting control comprises the plan of organization and the procedures and records that are concerned with the safeguarding of assets and the reliability of financial records and consequently are designed to provide reasonable assurance that:

-Transactions are executed in accordance with management's general or specific authorization.

-Transactions are recorded as necessary (1) to permit preparation of financial statements in conformity with generally accepted accounting principles or any other criteria applicable to such statements and (2) to maintain accountability of its assets.

-Access to assets is permitted only in accordance with management's authorization.

-The recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. [Ref. 4]

In 1977, the AICPA issued SAS 20 which required the independent auditor to test only those internal accounting controls relied upon in the conduct of the audit and to report significant weaknesses to management. SAS 20 did not, however, require auditors to evaluate the totality of controls present in the organization under generally accepted auditing standards.

The Foreign Corrupt Practices Act (FCPA) was passed late in 1977 in response to the Securities and Exchange Commission's (SEC) continued concern over direct or indirect payments to foreign and domestic government officials to influence the conduct of business. The FCPA mandates that companies keep financial records which, in reasonable detail, accurately and fairly reflect transactions and asset dispositions, and, maintain a system of internal accounting control sufficient to provide reasonable assurance that the broad objectives of internal accounting control are achieved. The Act also prohibits payments to foreign officials, parties, or candidates for the purpose of obtaining business, and holds corporate management responsible for corrupt payments even if they are not directly involved. Reactions to the FCPA are varied. Some companies have intensified efforts to review and strengthen internal control practices; others have taken steps to build a

defense against any future charges of non-compliance with the ICPA even if such steps achieve minimal, if any, improvement in internal control.

#### E. EVOLUTION IN THE PUBLIC SECTOR

The institution of internal control requirements in the public sector closely followed the 1949 AICPA pronouncement on internal control. The Budget and Accounting Act of 1950 directed the heads of Federal agencies to establish and maintain systems of internal control. This Act included not only internal control systems concerned with full disclosure of an agency's financial results, financial information for management, reliable accounting results, and integration of agency and Department of the Treasury accounting systems, but also control systems dealing with agency accountability of property assets and funds. Thus, as far back as 1950, the Federal government had enacted legislation directed at ensuring the establishment of systems of internal accounting controls with little regard for internal administrative controls.

The Inspector-General Act of 1978 created Inspector-General offices in some 12 executive departments and agencies as a means to combat fraud, waste, and abuse in the Federal government. While the Department of Defense (DoD) was initially exempt from this legislation because of the pre-existence of inspector-general positions in the military departments, a modification to the Act in 1982 resulted in the development of a separate civilian inspector-general position in DoD.

The Reagan Administration's Reform '88 initiatives presented a long-term program of improvement which challenged government to operate its administrative systems as efficiently as successful organizations in the public and

private sectors. The Deputy Director of the Office of Management and Budget (OMB) issued a statement on Reform '88 as follows:

Internal controls are safeguards that any efficient organization must have. Assurance that these safeguards are in place in the agencies is a basic prerequisite to achieving the President's goal of a modernized, efficient government--the goal of Reform '88. [Ref. 5]

The impetus of the Reform '88 program renewed and increased emphasis on the establishment of complete internal control systems in the Federal government to include both accounting and administrative controls. As a result of the Presidential initiative, guidance was provided by the Executive Branch in the form of OMB Circular A-123. The impact of A-123 was not felt until Congress passed the Federal Manager's Financial Integrity Act (FMFIA) which put teeth in the Circular by (1) requiring OMB and the Comptroller General to develop guidelines for the evaluation of internal control systems, (2) requiring evaluation of agency's systems of internal control in accordance with the guidelines, (3) requiring the head of each executive agency to report annually to the President and the Congress indicating whether the agency's internal controls comply with the Comptroller General's guidelines, and (4) requiring agencies to identify material internal control weaknesses and the plans for correcting those weaknesses in their annual report. The outcome of the FMFIA was the issuance of the Comptroller General's guidelines and the revision of OMB Circular A-123 to include the recently published Comptroller General Standards for Internal Control. The Circular continues to direct the requirement of both internal administrative and accounting controls, but the familiar emphasis on accounting controls has continued to overshadow the satisfactory development of administrative control systems.

CMB Circular A-123, for example, provided the following definition for internal control:

The plan of organization of all the methods and measures adopted within an agency to safeguard its resources, assure adequacy and reliability of its information, assure adherence to applicable laws, regulations and policies, and promote operational economy and efficiency. [Ref. 6]

While prescribing the policy that all agencies would maintain effective systems of internal accounting and administrative control, CMB's definition merely exchanged the phrase "...reliability of accounting data..." with "...reliability of information..." in an attempt to adapt the 1949 AICPA definition to include internal administrative control requirements. A revision of the Circular, issued on 16 August 1983, narrowed the original Circular definition to one more closely aligned to the AICPA's 1958 representation of accounting controls.

DoD provided no additional guidance relative to internal administrative control in its Directive 7040.6, Internal Control Systems. Reiterating the OMB definition, the directive assigned internal control responsibilities for the conduct of the program within the Department. An unpublished draft revision to 7040.6 has adopted the narrower concept of internal control expounded by the revised A-123 Circular. A notable change, however, is that DoD chose to retitle the draft Management Control in an attempt to reflect the all encompassing aspects of the internal control process.

Secretary of the Navy Instruction (SECNAVINST) 5200.35, Internal Control Systems in the Department of the Navy, stressed:

(1) internal controls apply to all programs and functions (i.e., they are not applicable solely to the financial management area), and

(2) implementing and carrying out an internal control program is managements' responsibility. [Ref. 7]

Expanding the original versions of both OMB and DoD definitions of internal control, the Instruction supports the broader connotation of internal control and adds that internal controls are synonymous with management controls:

Internal controls are the plan of organization and all of the methods and measures adopted within the Department of the Navy (DoN) to:

- Safeguard resources and assure the accuracy and reliability of information (accounting controls)

- Assure adherence to applicable laws, regulations and policies and promote operational economy and efficiency (administrative controls)

Internal controls are management controls and apply to the entire range of DoN programs and functions. [Ref. 8]

In response to requirements of higher headquarters to ensure protection against waste, fraud, and abuse, the Marine Corps has continued the application of the broader definition of internal control. Marine Corps Order (MCO) 7000.15, Establishment and Maintenance of Internal Control Systems, provides additional clarification of internal administrative controls:

Administrative Control. Administrative control provides the organizational structure and parameters through which missions and goals are achieved and coordination and cohesiveness are maintained. Establishment and maintenance of administrative control is a command/management responsibility applicable to all functional areas throughout an organization. Administrative controls generally have an effect on employee awareness of individual responsibility, create a positive organizational attitude, act as an incentive to employees to follow procedures, and provide reasonable assurance that the failure to perform assigned procedures will result in appropriate disciplinary action. Command/Managerial decisions pertaining to administrative control can have a direct influence on the quality and adequacy of accounting controls. Some administrative control procedures can also have a significant influence on the type of internal accounting controls employed. [Ref. 9]

MCO 7000.15 is the initial attempt by the Marine Corps to adequately explain internal administrative control and its interrelationship with and impact on the organization. The methodology provided in the order to facilitate the implementation of internal control programs continued the traditional emphasis on internal accounting control. MCO 5200.24, entitled Establishment, Maintenance, Review and Improvement of Management Control Systems, is presently in publication. While continuing to focus on the broader definition of internal control, the Marine Corps has adopted both the Secretary of the Navy's and DoD's interpretation of internal control as management control. The Order provides increased methodology for implementing non-accounting type control systems.

#### C. ARGUMENT FOR A BECAD DEFINITION

The development and practice of the narrow concept of internal accounting control has enabled the independent auditor to limit his legal liability by constraining the scope of his audit and subsequent opinion to basically quantifiable data. This practice, however, while fulfilling the auditor's responsibility to third parties, fails to serve management's full range of needs and is not ascribed to by the AICPA in whole. Paul Grady, chairman of the AICPA's Committee on Auditing Procedures, commented on the naivete of relying solely on audits of internal accounting controls in 1957:

The suggested narrowing of viewpoint, in my opinion, would constitute serious regression and impair the foundation of independent auditing. It may sound paradoxical, but there are many endeavors wherein a broader concept of responsibility results in a lesser risk...  
[Ref. 10]

Bradford Gran, a Certified Internal Auditor and manager of Internal Auditing for a public corporation writes:

As a service to management, we can and should investigate reality, standards, and the decision tables associated with controls that are apart from pure accounting applications. Such controls are essential to the profitable operation of the business. In fact, they are more important to the success or failure of the business than...accounting controls. [Ref. 11]

Roger Carolus, a Certified Internal Auditor, Certified Public Accountant, and President and Chief Auditor of a public corporation, described the 1958 AICPA action of dividing the 1949 definition of internal control into accounting control and administrative control as:

breaking Humpty Dumpty into pieces,....and until Humpty Dumpty is put back together again-that is, until we revert to the full, inclusive 1949 definition-we will not have a definition of internal control useful and intelligible to management. [Ref. 12]

Grady, Gran, and Carolus have acknowledged that the reliance on internal accounting controls alone may not be adequate to ensure that the organization is operating as economically and efficiently as possible in the accomplishment of its objectives. Prior to the recording of financial information or the safeguarding of assets, there must be decisions rendered to provide direction for the organization. These decision processes are participated in by top management and are intended to move the organization towards goal accomplishment. Anthony, in Management Control in Nonprofit Organizations states:

Ordinarily, a formal management control system is a total system in the sense that it embraces all aspects of the organizations' operation. It needs to be a total system because an important management function is to assure that all parts of the operation are in balance with one another. [Ref. 72]

Anthony further states that:

A management control system should be designed so that the actions it leads management to take in accordance with their perceived self-interest are also actions that are in the best interest of the organization- goal congruence. [Ref. 14]

If the decision process is left uncontrolled, management decisions could yield to executive self-indulgence or direction that is not in the organization's best interests. Broadening the concept of internal control to include administrative controls should not be regarded as control of management decisions, but instead as control of the methods and procedures that produce information on which to base management's decisions. These kinds of controls provide descriptive information on particular functions and activities which enable management to affect organizational harmony and coordination. Bruce Jarrett, Vice President and Auditor of Parkdale Park in Corpus Christi, Texas, emphasizes the following key points in the establishment of a broader internal control program; first, "improved controls should lead to improved profit," and, second, "the controls should result in more complete utilization of resources..." [Ref. 15].

The passage of the Foreign Corrupt Practices Act (FCPA) stands as an indication that improved internal control practices were required to prevent corrupt business practices. The main thrust of the Act, however, was to enforce internal accounting control provisions for the proper financial recording of payments. While it is recognized that recording of illegal payments may bring about eventual disclosure, the crux of the problem lay in the decision processes leading to the illegal payments, not in their improper recording. The key issue suggested here is that questionable or illegal payments do not necessarily result

from a breakdown in the system of internal accounting controls but rather by circumvention of other existing control systems. The ultimate weakness, therefore, was not in the internal accounting controls in force, but in the administrative controls over the decision process [Ref. 16].

All too often management tends to view questions directed at the adequacy of their control systems as if they were directed at their own personal competence as a manager and a decision maker. A related issue lies in the matter of executive override of the internal control system. Martz comments on these weaknesses in the control system as they relate to executive prerogative:

Internal control is a good thing and worthy of much attention. It is not and cannot be infallible even at low levels, and the closer one gets to the top of an organization, the weaker is the restraint offered by internal control. [Ref. 17]

The establishment of an internal control system is expected to prevent both intentional and unintentional errors or irregularities at whatever level of occurrence in the organization. Sole emphasis on internal accounting controls will not prevent those irregularities as they are not intended to monitor the decision process in the organization. The size, complexity, decentralization, and rapid turnover of personnel (including top management) in today's organizations necessitate the implementation of a broader concept of internal control to assure that the totality of the processes ongoing in each sub-organization achieve the goals and objectives of the larger organization. William Cuchi makes the following generalizations about control in Japanese organizations:

Organizational life is a life of interdependence, of relying on others. It is also a life of ambiguity. Knowing this, and understanding the extreme complexity

of interdependency in their business, the top management...has determined that explicit (control) measures not be the final arbiter of decision making. They feel that if most top managers agree on what the company ought to be trying to do and how, in general, it ought to go about that set of tasks, then they will be able to rely in their mutual trust and goodwill to reach decisions far superior to anything that a formal (control) system could provide.

They furthermore understand that the informal, explicit measures of control cannot succeed alone. They can develop only under conditions of stable employment, slow evaluation and promotion, and low career specialization. Even with those aids, however, the subtle and implicit must be supported with the crutch of a formal control and analysis in a large, multi-product, multi-national, multi-technology organization in which a complete agreement on values can never be realized. [Ref. 18]

Raymond Reilly, in Internal Control in U.S. Corporations: A State of the Art, presents yet another look at the issue:

It argues for the ...point of view that internal controls are all controls which attempt to ensure the accomplishment of the ...objectives. Any attempt to define the issue more narrowly leaves open the possibility of a failure to control activities which could lead to a loss. [Ref. 19]

## E. SUMMARY

The private sector auditors' thrust continues to be on internal accounting controls due to that sector's concern for the fair presentation of financial statements. The development of internal controls in the public sector is following the same course as the private sector. As a result, little attention is being directed toward the establishment and integration of internal administrative control programs. The public sector is attempting to fill the administrative control void solely by applying internal accounting control techniques to the totality of the internal control process.

The necessity for adequate internal administrative control programs is essential in light of increased competition for scarce resources and the need to optimize operational economy and efficiency. The size, complexity, and diversity of organizations require the development of controls to achieve those goals.

### III. THE DEVELOPMENT OF A DEFINITION OF INTERNAL ADMINISTRATIVE CONTROL

#### A. LITERARY AND DEFINITIONAL DEFICIENCIES

As a preface to developing or refining definitions of management, internal, and administrative control, it bears noting that a literature search on these topics yielded very few references outside the professional auditing arena and little of a conceptual or empirical nature. Information that is available, therefore, is written from the point of view and interpretation of the independent auditor, not from that of the corporate executive. One major source of material was derived from a research project on the state of the art of internal control practices in U. S. corporations conducted by a group under the direction of Robert K. Mautz from the Eaton Accounting Center, University of Michigan, and underwritten by the Financial Research Foundation. Mautz introduced the team's research findings with the following comments:

Our study has found, and no doubt many corporate executives have realized, that little actual information is available on the subject of internal control practice. Based upon their analysis of the risks they face within their companies, corporate executives apparently have designed systems on an ad hoc basis which they find to be adequate for their needs or which they modify from time to time as such needs become evident. Little exchange of views across company lines appears to have taken place. [Ref. 20]

The acknowledgement of these deficiencies for comprehensive and current information extends beyond corporate management to the auditing and accounting professions as well. The AICPA's Special Advisory Committee on Internal Accounting Control concluded that:

At this point there is not sufficient empirical knowledge of how extensively control procedures and techniques are employed, in what combinations, in which industries, in companies of what size, and so forth. Although knowledge of current practices is not the only basis on which management should make judgments, the lack of knowledge about what a majority of companies have found necessary for purposes of effective internal accounting control further complicates the task of evaluation. [Ref. 21]

In addition to these recognized voids of data, the literature and common vernacular have interchanged terminology and definitions to such an extent that no clear notion of use, meaning, or associated objectives is in existence today. Numerous examples prevail which represent widespread disparity in understanding and use of definitional terms across the internal control spectrum. Some differences are of relatively small consequence; but others represent fundamental differences in concept. In illustration, the following selected excerpts present only two of many widely divergent views on the scope and nature of the term "internal accounting control". The SEC reinforced the AICPA's classical definition that accounting control strictly constitutes the safeguarding of assets and the reliability of financial records in the concluding comments of Release No. 34-13185:

The term 'internal accounting controls' does not ordinarily encompass all corporate policies and procedures. Matters of efficiency, employee relations, and production quality control, for example, should not be confused with the accounting controls established to insure the reliability of financial information. [Ref. 22]

In contrast to this view is Mr. Roger Carolus' comment to the AICPA in the "Report of the Special Advisory Committee on Internal Accounting Control" ....

certain elements found in what the committee describes as the 'internal accounting control environment' are an integral part of a well-designed, effective system of

internal accounting control. Examples of such elements are (1) a plan of organization, (2) the assignment of responsibility and delegation of authority, (3) a process of budgeting and budgetary control, (4) a program of hiring and developing competent financial personnel, and even (5) the process of ensuring a high level of ethical conduct by all employees involved in authorizing and recording transactions, safeguarding assets, and reporting financial information. [Ref. 23]

It is essential to dispose of any preconceived notions attributable to this wide range of conflicting opinion and general lack of definitional clarity of terms, prior to embarking on any new attempts to define terms which have more operational relevance in today's management context. Over the years, two contrasting views have developed on the validity of definitions. One contends that there is a firm relationship between a word and that which it signifies. This view further holds that there are true meanings for words, and that there is a need to identify the true essence of the thing to which the word applies and restrict usage of words to only those meanings. The alternative view is that words have no inherent meaning in themselves; their meaning is given by the specific user. It is essential that the user clarify how the word is being used so that the audience will not be misled. In this case then, words are something to be used, not something to be trusted as authoritative or expository [Ref. 24]. The latter view represents the approach to definition development that will be taken in this study. Consequently, focus will be directed on an understanding of the concept and the practical use behind the term vice the literary significance of the title or word.

#### E. THE NATURE OF CONTROL

Throughout this developmental process, it is imperative not to lose sight of the basic definition of control,

regardless of the modifier. "The definition of control is really quite simple: comparing what is to what should be. Another variation of this is: control compares reality with a standard" [Ref. 25].

A control system is one whose purpose is to achieve and maintain a desired state or condition. The following explanation of the elements of a control system is paraphrased from Anthony's discussion in his text, Management Control Systems. Any control system has at least these four elements: 1) a measuring device to detect what is happening in the factor being controlled, 2) a device to assess the significance of events by comparing information on what is actually happening with some predetermined standard or expectation of what should be happening, 3) a device for altering behavior, if required, and 4) a means of communicating information between these devices. The transmission of information from the device which detects to the control device which compares the data is called feedback. These four elements are directly interrelated and function in an interactive process. When human beings are interjected into control systems, outcomes lose their predictability because of differences in motivation, judgment, perceptions, and values. The exact nature of the interplay of these human characteristics cannot be observed in a quantifiable way; however, their influence oftentimes represents the difference between success or failure in an organization.

Control systems in organizations have the same four elements described above. An organization, or any of its subcomponents, has a desired state as outlined by its goals. Information about the actual state of the organization is compared with the desired state, and if the result yields a significant difference, action is taken. The action chosen can either bring the process back in line with organizational goals, modify the goals, or can result in a deviation or circumvention of the system.

## C. THE STRUCTURE AND DESIGN OF ORGANIZATIONS

### 1. Structure and Its Coordinating Mechanisms

A contemporary organization cannot exist without a framework to give it identity and direction. The concepts of design, structure, and coordination of an organization in and of themselves constitute control. Gene W. Dalton, states that "...organizations, after all, are the largest assemblages in our society that have anything resembling a central coordinating system. Organization implies control, and control is an inevitable correlate of organization" [Ref. 26]. Tannenbaum further points out:

The coordination and order created out of the diverse interests and potentially diffuse behaviors of members is largely a function of control. Organizations are purposive, hence managers need feedback to guide their acts toward the achievement of these purposes. Standards play a vital role in the planning, coordination, and problem location which make that feedback useful. [Ref. 27]

In his book The Structuring of Organizations, Henry Mintzberg develops concepts of organizational structure and design which work together to form an integrated entity of coordination, communication, and control. He begins by defining the structure of an organization as simply "the sum total of the ways in which it (the organization) divides its labor into distinct tasks and then achieves coordination among them" [Ref. 28]. The division of labor is dictated largely by the job to be done and the technical system available to do it. Coordination, however, proves to be a much more complicated concept involving various means referred to as "coordinating mechanisms". These coordinating mechanisms are as much concerned with control and communication as with coordination, and,

five coordinating mechanisms seem to explain the fundamental ways in which organizations coordinate their work: mutual adjustment, direct supervision, standardization of work processes, standardization of work outputs, and standardization of worker skills. These should be considered the most basic elements of structure, the glue that holds organizations together. [Ref. 29]

"Mutual adjustment achieves the coordination of work by the simple process of informal communication. Under mutual adjustment, control of the work rests in the hands of the doers" [Ref. 30], as shown in Figure A.1. This mechanism is a fundamental one and is used in the simplest as well as the most complex of organizations. At the outset of an undertaking, no one can be sure exactly what needs to be done and knowledge is acquired as the work progresses. The success of the evolution, regardless of the degree of environmental complexity, depends primarily on the ability of the individuals to adapt to and communicate with each other along their uncharted course.

As an organization outgrows its simplest state, it tends to turn to a second coordinating mechanism - direct supervision. "Direct supervision achieves coordination by having one individual take responsibility for the work of others, issuing instructions to them and monitoring their actions.... In effect, one brain coordinates several hands...." [Ref. 30], as illustrated in Figure A.1.

Neither mutual adjustment nor direct supervision are absolutely required to coordinate work. The work can be standardized. "Coordination is achieved on the drawing board, so to speak, before the work is undertaken.... The work processes themselves, the outputs of the work, and the inputs to the work - the skills (and knowledge) of the people who do the work - can all be designed to meet predetermined standards" [Ref. 31].

Work processes are standardized when the contents of the work are specified or programmed.... Outputs are standardized when the results of the work, for example the dimensions of the product or the performance are specified.... Skills (and knowledge) are standardized when the kind of training required to perform the work is specified. [Ref. 32]

Figure A.1 shows the three mechanisms of standardization. In essence, standardization of skills achieves indirectly what standardization of work processes or work outputs accomplishes directly: it controls and coordinates the work.

The five coordinating mechanisms tend to be activated in different patterns of dominance as the organization transitions through its development life cycle. As organizational work becomes more complex and worker numbers increase, the need for leadership to facilitate coordination and control causes a shift from mutual adjustment to direct supervision. As the work becomes even further involved, another major transition occurs as the control of the work shifts to standardization. When the jobs are simple and routine, standardization of work processes may be relied on, but more complex work may preclude this, thus forcing the organization to turn to the standardization of outputs by specifying the results of the work and commonly leaving the choice of process to the discretion of the worker. In a complex environment, however, even the outputs oftentimes are not conducive to standardization, so the organization must resort to standardizing the skills of the worker. If the diverse tasks of the organization prove impossible to standardize, the organization must return to the use of the simplest, yet most adaptable coordinating mechanism - mutual adjustment. In the face of highly complicated situations, the sophisticated problem-solver must communicate informally if he is to accomplish his work.

In general, beyond some minimum size, most organizations seek to rely on standardization where they can; where they cannot, they use direct supervision or mutual adjustment, these two being partly interchangeable. When direct supervision fails, perhaps because the task of coordination is too big for one brain, the organization will resort to mutual adjustment. Alternatively, when mutual adjustment breaks down, perhaps because there is a need for one brain to guide others that cannot agree among themselves, the organization will return to direct supervision. [Ref. 33]

## 2. Parts of the Organization

To understand how organizations are structured, and thereby controlled, necessitates a preliminary understanding of how they function. Every organization consists of a complex mixture of component parts, associated functions, and interrelationships. Specifically, it is essential to know how work, authority, information, and decision processes flow through the various component parts and serve to define an organization's structure and control systems.

Just as there is a direct link between organizational development and the use of the various coordinating mechanisms, there is also a connection between these elements and the parts of an organization. The organization in its nascent and simplest form can rely on mutual adjustment to coordinate the work of its operators who are basically self-sufficient in the generation of a product or a service. As the organization grows and adopts a more complex division of labor within its group of operators, direct supervision becomes increasingly necessary for coordination and control. This supervision comes in the form of a manager who introduces a first administrative division of labor in the structure. As the organization continues to refine itself, more managers are added - not only managers of operators, but also managers of managers. This evolutionary process results in an administrative hierarchy of

authority. As organizational complexity increases, standardization is incorporated as a further means of coordinating and controlling the work of the operating level. The responsibility for much of this standardization is assigned to a group composed of analysts.

We can distinguish three types of control analysts who correspond to the three forms of standardization: work study analysts (such as industrial engineers), who standardize work processes; planning and control analysts (such as long-range planners, budget analysts, and accountants), who standardize outputs; and personnel analysts (including trainers and recruiters), who standardize skills. [Ref. 34]

Another more extensive aspect in the standardization of skills is that which is conducted outside the organization prior to the hiring process. The interjection of these analysts results in a second type of administrative division of labor to the organization, between operators and managers who do and supervise the work, and analysts who standardize it. As some of the control over the work was removed from the operator with the introduction of supervision, so a portion is retracted from the managers as well, as the systems designed by the analysts become increasingly relied upon for coordination. Another component may evolve to indirectly support the functioning of the operators outside the basic flow of their work. These support units are not involved in standardization, nor are they to be considered strictly as advisors. Rather, they have specific functions to perform such as food services, research and development, or public relations. This enables the conceptual summarization of the parts of an organization as illustrated in Mintzberg's Figure A.2 [Ref. 35].

The strategic apex consists of those people who are charged with the overall responsibility for the organization: the top-level managers and their direct support

personnel. This level must ensure that the organization serves its mission in an effective way, in addition to meeting the needs of those people who control or otherwise have power over the organization. Mintzberg suggests that the execution of this function involves three sets of duties: that of direct supervisor, manager of organizational boundary conditions, and strategist.

In amplification, Mintzberg indicates that....

among the managerial roles associated with direct supervisor are resource allocator, including the design of the structure itself, the assignment of people and resources to tasks, the issuing of work orders, and the authorization of major decisions made by the employees; disturbance handler, involving the resolution of conflicts, exceptions, and disturbances sent up the hierarchy for resolution; monitor, involving the review of employees' activities; disseminator, involving the transmission of information to employees; and leader, involving the staffing of the organization and the motivating and rewarding of them. In its essence, direct supervision at the strategic apex means ensuring that the whole organization function(s) smoothly as a single integrated unit. [Ref. 36]

Mintzberg explains the role of managing boundary conditions as one of managing the organization's relationships with its environment. This includes informing influential people in the environment about the organization's activities, developing contacts and tapping them for information, serving as a liaison for those who wish to influence the organization's goals, and acting as a negotiator or even a figurehead.

Strategy is viewed as the mediator between the organization and its environment. Strategy formulation draws from an interpretation of the environment and is the development of consistent decisions which balance the organization's strengths and needs, with responsiveness to the environment.

In general, the strategic apex takes the widest, and as a result, the most abstract perspective of the organization. Work at this level is generally characterized by a minimum of repetition and standardization, considerable discretion, and relatively long decision-making cycles. Mutual adjustment is the favored mechanism for coordination among the managers of the strategic apex itself. [Ref. 37]

A chain runs from the senior managers just below the strategic apex to the first-line supervisors who have direct authority over the operators and this constitutes the "Middle line". In brief, the middle-line manager performs all the managerial duties found at the strategic apex, but in the context of managing his own unit.

He must serve as a figurehead for his unit and lead its members; develop a network of liaison contacts; monitor the environment and his unit's activities and transmit some of the information he receives into his own unit, up the hierarchy, and outside the chain of command; allocate resources within his unit; negotiate with outsiders; initiate strategic change; and handle exceptions and conflicts.

Managerial jobs do, however, shift in orientation as they descend in the chain of authority. There is clear evidence that the job becomes more detailed and elaborated, less abstract and aggregated, more focused on the work flow itself. Thus the 'real-time' roles of the manager - in particular, negotiation and the handling of disturbances - become especially important at lower levels in the hierarchy. [Ref. 38]

The operating core consists of those members who perform the basic work to directly produce goods and services for the organization. This level performs four primary functions: secures the inputs, transforms the inputs into outputs, distributes the outputs, and provides direct support to the aforementioned functions. Mintzberg points out that "Since it is the operating core that the other parts of the organization seek to protect, standardization is generally carried furthest here. How far, of course, depends on the work being done...." [Ref. 39].

The analysts who indirectly support the organization are found in what Mintzberg refers to as the technostructure. These analysts do not participate directly in the operating work flow, but instead design, standardize, plan, change, or train the people who actually do the work. In a fully developed organization, the analysts' skills may be utilized at every level of the hierarchy: production schedules, time-and-motion studies of the operators' work, and quality control systems at the lowest levels; middle manager training and operations research studies of informational tasks at the middle levels; strategic planning and financial control systems at the strategic apex. Mintzberg indicates that "while the analysts exist to standardize the work of others, their own work would appear to be coordinated with others largely through mutual adjustment. (Standardization of skills does play a part in this coordination, however, because analysts are typically highly trained specialists)" [Ref. 40].

The final element in an organization's structure is the support staff which is made up of a large number of specialized units that exist to provide indirect support to the basic missions of the organization. Because there are a wide variety of support units, conclusions on a favored coordinating mechanism cannot be drawn.

Each unit relies on whatever mechanism is most appropriate for itself - standardization of skills in the office of legal counsel, mutual adjustment in the research laboratory... However, because many of the support units are highly specialized and rely on professional staff, standardization of skills may be the single most important coordinating mechanism. [Ref. 41]

### 3. The Organization Viewed as a System of Flows

To analyze how these parts function together, it is necessary to look at the components of the organization as linked together by different formal and informal systems of flows of authority, work material, information, and decision processes. These systems of flows considered in their totality begin to describe the sheer complexity of the whole organization.

The flow of authority is delineated by the organization chart which represents a formal picture of the division of labor. The chart indicates what positions exist in the organization, how these are grouped into units, and how formal authority flows among them. This view of the organization essentially describes the use of direct supervision as a coordinating mechanism. Despite the fact that formal authority only represents one very limited aspect of the complex organization, it must be understood if the functioning of organizations is to be comprehended. Melville Dalton, in his study of informal relationships in an American manufacturing plant notes the formal structure restrains the informal in three basic ways:

First, the formal largely orders the direction the informal takes. Second, it consequently shapes the character of defenses created by the informal. And third, whether the formal is brightly or dimly existent in the blur of contradictions, it requires overt conformity to its precepts. [Ref. 42]

The functioning of an organization can also be described as a formal system of regulated flows, or in other words, as processes which are systematically and explicitly controlled. Mintzberg asserts that "this view (of regulated flows) was not only a favorite of early organizational theorists, but remains the dominant one in the literature of planning and control systems today" [Ref. 43]. According

to Mintzberg, the flows identified in the regulated system describe the use of standardization and consist of the operating work flow, the flow of control information and decisions, and the flow of staff information. Operating work flows concern the movement of materials and information in a variety of ways throughout the input, processing, and output functions. Due to the nature of these processes, it can be observed that regulated work flow relationships can exist at any level of the hierarchy where work standardization is used, but is most characteristic of the operating core.

Of critical importance to this discussion is a second system of regulated flows developed by T. I. Paterson - those of the formal control systems which regulate the vertical flows of information and decision making from the operating core up the chain of authority. Paterson conceptualizes regulated control flows as vertical channels up and down the middle line.

Commands and instructions are fed down the chain of authority, emanating from the strategic apex or a middle-line position, and elaborated as they flow downward. In the formal planning process, for example, general 'strategic' plans are established at the strategic apex; successively, these are elaborated into programs, capital and operating budgets, and operating plans (e.g., marketing and manpower plans), finally reaching the operating core as sets of detailed work instructions. In effect, in the regulated system the decisions made at the strategic apex set off ever-widening waves of implementation decisions as they flow down the hierarchy.

The upward control system exists as a "management information system", or MIS, that collects and codes data on performance, starting in the operating core. As this information passes each level in the hierarchy, it is aggregated until, finally, it reaches the strategic apex as a broad summary of overall organizational performance. [Ref. 44]

Figure A.3 illustrates some aspects of the regulated control flows in a firm - the downward planning system and the upward aggregated feedback information on finance and production.

Management analysis of feedback information is a key element in effective decision making. The regulated control system includes the specification of the types of decisions that can be made at each level of the organization. Managers at different levels can interrupt the regulated flows of information up and down the hierarchy to make decisions appropriate to their level. Commands coming down are stopped at a designated level and handled there; information on exceptions (those decision situations that cannot be dealt with at a given level) are passed up the hierarchy until they reach a manager with sufficient formal authority to handle them. Berrini [Ref. 47] presents a hypothetical regulated decision system in Figure A.4.

The regulated flow of information for the purpose of feeding staff information and advice into line decision making is the third system in an organization. This information flows horizontally between the line managers in the middle and the support staff and technocratic groups on either side to support the line decision process. These specialists design and operate indirect support systems, collect specific intelligence information from the external environment, and lend their expertise in dealing with exceptions and the planning process.

Mintzberg discusses three additional systems of flows --informal communication, work constellation, and the ad hoc decisions process-- which are all characterized by their lack of official organizational recognition, and the fact that they supplement, circumvent or are independent of the systems of formal authority and regulated flow processes. These informal systems revolve around the aspects of unpredictability, randomness, subjectivity, judgment, motivation and diverse personalities and values that are inherent to the interactions of unique human beings. Galton defines formal or official as "that which is planned

and agreed upon" and informal or unofficial as "the spontaneous and flexible ties among members, guided by feelings and personal interests indispensable for the operation of the formal, but too fluid to be entirely contained by it" [Ref. 46]. Consequently, a dichotomy arises between the first two systems of clear cut formal authority and regulated flows as explicit reflections of organizational structure and control; and the last three systems which are informal, implicit, uncontained by organizational boundaries, and revolve around people and their unique behavior and motivations. This dimension of the degree of formality will influence not only the structure and processes of an organization, but will impact also on the behavior and productivity of its members.

#### 4. Design Parameters

Design assumes discretion, an ability to alter the system. In the case of organizational structure, design means turning those knobs that influence the division of labor and the coordinating mechanisms, thereby affecting how the organization functions --how materials, authority, information, and decision processes flow through it. [Ref. 48]

Mintzberg contends that the "knobs" are nine essential parameters that organizations use to divide and coordinate their work in order to establish stable patterns of behavior for ultimate predictability and control.

The first three parameters --job specialization, behavior formalization, and training and indoctrination-- are considered in the design of individual positions in the organization. Job specialization relates to the scope and number of tasks and the degree of personal control over the work. Behavior can be formalized by job or by work flow, where the organization attaches behavior specifications to

the job or work; or formalized by rules, where the organization institutes rules for all situations --all jobs, all work flows, all workers-- which may specify who can or cannot do what, where, to whom, and with whose authority. Regardless of the approach, there is ultimately an increase in predictability and control and reduced variability in the organization. The training and indoctrination parameters both represent the internalization of accepted or standardized patterns of behavior in the workers.

The next set of parameters --unit grouping and unit size-- influence the design of the superstructure. Mintzberg suggests that the unit grouping process establishes the formal authority and hierarchy normally found in an organization.

Given overall organizational needs --goals to be achieved, missions to be accomplished, as well as the technical system to accomplish them-- the designer delineates all the tasks that must be done... The designer then combines these tasks into positions according to the degree of specialization desired, and determines how formalized each should be as well as what kind of training and indoctrination it should require. The next step is to build the superstructure, first by determining what types and how many positions should be grouped into first-order units, and then what types and how many units should be grouped into ever-more-comprehensive units until the hierarchy is complete. [Ref. 49]

Grouping forms the basis for direct supervision and mutual adjustment via the hierarchy and the need to share common resources. Grouping also contributes to the standardization of outputs by providing common measures of performance. Unit size revolves around the concepts of span of control, or the maximum number of people one manager can oversee effectively, and the shape of the superstructure: tall, with small units and narrow spans of control or flat, with large units and wide spans of control. Mintzberg summarizes his comments on size with

unit size is driven up by (1) standardization of all three types (input, work process, output), (2) similarity in the tasks performed in a given unit, (3) the employees' needs for autonomy and self-actualization, and (4) the need to reduce distortion in the flow of information up the hierarchy; and it is driven down by (1) the need for close direct supervision, (2) the need for mutual adjustment among complex interdependent tasks, (3) the extent to which the manager of a unit has non-supervisory duties to perform, and (4) the need for members of the unit to have frequent access to the manager for consultation or advice. [Ref. 50]

The establishment of individual positions and the development of the superstructure are not sufficient to complete the design of the entire organization. Important interdependencies remain and are accounted for in designing the two lateral linkage parameters: planning and control systems and liaison devices. Together planning and control systems directly regulate outputs and indirectly regulate behavior. A plan specifies a desired output or standard and the control assesses whether or not the plan has been achieved. Mintzberg distinguishes between two different kinds of planning and control systems: one that focuses on the regulation of overall performance or after-the-fact monitoring of results that he calls performance control, and the other that seeks to regulate specific actions that will take place at some future time which he identifies as action planning.

In other words...the organization can measure outputs in two ways. It can use performance control to measure the results of a whole series of actions, and use this information to make changes: 'The profit rate should increase from 7 to 10 percent,... Alternatively, it can use action planning to determine in advance what specific decisions or actions are required.: 'Blue widgets should be sold to customers X, Y, and Z,... while performance control is a pure means of standardizing outputs, action planning - because it specifies particular actions - resembles in some ways the design parameter of formalization of behavior. [Ref. 51]

To further differentiate between the concepts, Mintzberg adds....

performance control imposes general performance standards over a period of time, with no reference to specific actions; action planning imposes specific decisions and actions to be carried out at specific points in time; and behavior formalization imposes the means by which decisions and actions are to be carried out. [Ref. 52]

Figure A.5 [Ref. 53] shows these interrelationships among decisions, action planning, and performance control.

Liaison devices are incorporated into the formal structure to encourage interactive contacts between individuals. These devices facilitate informal communication and mutual adjustment and represent a continuum of established liaison positions, task forces and standing committees, integrating managers with delegated formal authority, and the matrix organizational structure. Work that is complex, highly interdependent, and horizontally specialized requires close coordination and therefore would benefit from the use of liaison devices. Mintzberg asserts that "In general, given the nature of the work of middle managers --largely ad hoc but somewhat amenable to structure-- ... the set of liaison devices (is)... the single most important design parameter of the middle line" [Ref. 54].

The final parameters used to design the decision-making system are vertical and horizontal decentralization. These parameters focus on the patterns for the dispersal of power over the decisions made in the organization. Vertical decentralization relates only to the chain of authority -- the strategic apex and the middle line. Various patterns are possible here.

In some organizations power remains at the strategic apex; in others, it is delegated to various levels in the middle line, sometimes selectively, sometimes in parallel; and in still other cases, power passes right

to the bottom of the middle line, and perhaps beyond, to the operating core. If one generalization is in order, it is that classic authority patterns continue to dominate organizational power systems, that is, formal power resides in the first instance with the chief executive at the top of the hierarchy. From there it is delegated at his will. And formal power, vis-a-vis the informal, still matters a great deal in organizations. [Ref. 55]

Horizontal decentralization brings the technostructure, support staff, and operating core into the power system. Again there are all sorts of power distributions ranging....

from negligible staff groups to powerful ones, from weak operating cores to dominant ones. But one point is clear. All have informal power to the extent that they contain expertise. Staff groups do more than just advise when they have the knowledge needed to make technical decisions; operators accumulate power when they have the expertise needed to execute managerial decisions, and when they are professionals, that is, perform jobs based on complex knowledge and skills. [Ref. 56]

##### 5. The Organizational Dichotomy

The coordinating mechanisms, the segregation of the organization into parts and their functional relationships, the systems of flows, and the design parameters -- because they serve to coordinate the organization -- all infer the concept of control. Litterer contends, "recent developments in the area of control, or cybernetics, have shown (control and coordination) to be the same in principle" [Ref. 57]. A dichotomy, however, appears between these "objective" elements in Mintzberg's model and the "subjective" factors of individual personalities and social needs. Dalton refers to the unanticipated effects of this anomaly in Motivation and Control in Organizations....

few things have been more baffling to managers than the results of some of their attempts to develop workable performance measures and controls, thus channeling the energies of their employees toward the firm's objectives. Often when they least expect it, they encounter restriction of output or departmental in-fighting. On

one hand they find what seems to be apathy, and indifference; yet on the other hand, they keep discovering remarkably ingenious methods developed by their subordinates for beating the system. [Ref. 58]

Both Dalton and Hopwood acknowledge this dichotomy in their approach to controls. Dalton [Ref. 58] describes three categories of controls: (1) organizational, which tend to relate to very formal, structured dimensions; (2) individual or self, which tend to be much less structured and are derived from individual goals, aspirations, and expectations; and (3) informal group or social, which to a large extent fall between organizational and individual controls in terms of structure and individuals involved and evolve from mutual commitment to group norms. Figure A.6 [Ref. 59] summarizes Dalton's categories of controls, the respective administrator, and relevant factors associated with each type. The Dalton model distinguishes each type of control on the basis of control source and direction, behavioral and performance measures used for control, signals for corrective action, reinforcements or rewards for compliance, and sanctions for noncompliance.

Hopwood [Ref. 60], using a similar classification, explains how administrative, social, and self controls affect control of the firm. Hopwood's paradigm of organizational control, as presented in Figure A.7 [Ref. 61], denotes the fact that controls of an enterprise are influenced by other control systems.

Dalton and Hopwood are concerned with the behavior of individuals, whereas Newman and Amey address structural models of control and related information feedback constructs used for regulation. Newman [Ref. 62] classifies control into three types based on temporal considerations: steering, yes-no, and post-action. Steering controls are forward-looking and attempt to adjust the process before the

fact. Yes-no controls are continuous or selective real-time screening controls, similar to quality control on a manufacturing line where the element of interest is either accepted or rejected. Post-action controls are activated after the fact, when outcomes are compared with a standard. Post-action controls represent performance results information useful for determining compensation or rewards, and inputs to the planning process. It is interesting to note that the same information may be used for different types of control by different individuals. For example, a department head's annual budget presentation which subsequently receives criticism from higher management represents post-action control for that particular department head, and at the same time serves as a steering control to those department heads who have not yet presented their budgets. Newman's three types of controls focus on different behaviors or elements of a specific process. Steering controls provide direction on how to get from point X to point Y to point Z. Yes-no controls presuppose the selection of the appropriate route from X to Y to Z, and measure only execution and timeliness at various checkpoints along the route. Post-action control does not evaluate the route or the means but instead is solely concerned with the end result-arrival at point Z [Ref. 63]. In reference to Newman's model, Fuske observes:

The more the Controller moves the control system toward post-action controls and away from steering controls, the less the Controller can do to change or guide the process. If a one-time process is controlled by post-action controls, everyone will have to wait until the process is completed to find out if it worked or not. If steering control is used, a better estimate of whether the estimate will work may be available. On the other hand, controlling some kind of repetitive process using post-action control allows for changes in future predicts. Whether a type of control is restrictive or not depends to a large extent on the situation and individuals involved in the situation. [Ref. 64]

Amey's [Ref. 65] typology is similar to Newman's except Amey uses a feedback model to describe the types of control. Newman's before-the-fact steering control correlates directly with Amey's learning model. The learning framework represents a pattern recognizer to lend assurance that optimal or near-optimal decisions are made. Newman's yes-no control corresponds to Amey's adapter, which considers variability and permits feedback for new elements processed in the system. Post-action control is identified as the compensator, or after-the-fact control, in Amey's terminology.

Hopwood's typology correlates closely with Dalton's behavioral model, just as Amey's classification corresponds to Newman's structural model. The integration of the structure and behavior approaches permits the presentation of control along multiple dimensions.

The differences in the types of control are not important in themselves. Their importance lies in the fact that in any situation in which there is control, that control can exist along multiple dimensions... To understand the influence of a particular control within an organization, one must identify the unique combination of control characteristics and situational contingencies. [Ref. 66]

Figure A.8 [Ref. 67] reflects these multiple dimensions by relating the models of Dalton and Hopwood on the horizontal axis to those of Newman and Amey along the vertical axis.

The extent to which an organization formally designs its structure, institutes standardization, assigns authority, develops a reliable MIS, sets goals and objectives, and delineates organizational policies and procedures for coordination and control, can be inconsequential to the success of a control system.

Individuals can only be controlled inasmuch as they accept the control... In order for a control system to work, both sides have to agree to it and cooperate. If

the individuals participating do not cooperate, there will not be any control. It is that simple. Designing a system that the individual controlled will accept is precisely the key factor in the design process. [Ref. 68]

An organization, therefore, can be identified by two broad, interrelated dimensions: the administrative structure with all its implications, and the situations and interactions of people with all the associated diversities and complexities of human behavior. As previously indicated, a third dimension, the degree of formality, is a direct correlate, and in conjunction with the other two serves to define the substance of an organization.

#### D. THE CONCEPT OF MANAGEMENT CONTROL

##### 1. The Relationship of Planning and Control

The process of planning has taken on greater significance in light of modern advanced technology, increased environmental uncertainty, and expanded organizational size and complexity. Anthony claims that planning and control are the two most important activities of any manager. Ruske views planning and control as separate but complementary concepts:

The plan is the means by which the manager intends to affect the future; control is the means by which the manager ensures that the plan functions....The manager cannot plan if there is no information indicating current status. On the other hand, the manager cannot control unless there is some plan that indicates the purpose of control. [Ref. 69]

Planning consists of both a process and a structure. Analysis of Emery's five step planning process and Ackoff's five part planning structure reveals a distinct connection between planning and control. Emery's [Ref. 70] first step

in the planning process is to decide on the values or primitive data to be used. The primitive data may be either projected or historical and may vary in detail depending on the level and purpose of the plan. The second step is to manipulate these values in order to determine the consequences of alternative plans. The selection of the best plan from the alternatives, and the translation of the selected plan into a form for operational planning are the third and fourth steps. The final step in Emery's planning process is control of the plan. Control compares actual results against the plan and takes appropriate actions to achieve the plan's objectives.

Ackoff identifies ends, means, resources, implementation, and control as the five parts of a plan's structure. The ends are the goals or objectives; means are the policies, programs, and procedures to achieve the goals; resources represent the determination and procurement of the type and quantities of variables required to execute the plan; implementation concerns designing the process for execution of the plan; and control is the "design of a procedure for anticipating or detecting errors in, or failures of, the plan and for preventing or correcting them on a continuing basis" [Ref. 71]. Both Emery's and Ackoff's acknowledgment of control as the last stage or part of planning serves to emphasize the interrelationship and mutual dependence of planning and control.

## 2. Strategic Planning and Control

Strategic planning, the broadest organizational planning context, is "the process of deciding on the goals of the organization and on the broad strategies (activities) that are to be used in attaining these goals" [Ref. 72].

For the purpose of analysis, it is possible to abstract two important aspects from the strategic process: formulation, and implementation. According to the authors of Business Policy [Ref. 73], strategy formulation is the decision process which determines what the organization will do, based on the analysis of four components: market opportunity, organizational competence and resources, personal values and aspirations, and recognized obligations to others. Strategy implementation, on the other hand, marks the first reference to administrative activity and control. It concerns the design of the organization's structure, information and control systems, relationships, and processes to permit efficient and effective performance, integration, and coordination. Top management plays a critical role in establishing organizational purpose and climate. Strategy implementation, therefore, is an administrative design process aimed at achieving results.

Strategy is a process that is in many ways inherent to the structure, behavior, and culture of the organization in which it takes place. In practical application, the two aspects of strategy formulation and implementation are so interrelated as to be inseparable. Organizational structure and processes constrain the formulation of strategy; however, formulation is necessary before implementation can be meaningful, and each must be done in terms of the other. Figure A.9 summarizes the analysis of strategic formulation and implementation as a pattern of interrelated decisions.

Formalized control of strategy formulation would only serve to inhibit the innovation and creativity vital to this process; nevertheless, a control loop which feeds information back into this activity is essential to permit reassessment and modification of current strategies in light of changed external environmental or internal organizational

conditions. Recognizing the need to monitor strategic progress and change, Peter Lorange introduced the concept of "strategic control" in 1982 and noted:

Management control practices still continue to play an important role as a vehicle for managing today's corporations, but they do not seem to have evolved significantly towards being more explicitly reconcilable with strategy-setting management processes...it is useful to see strategic planning and control as separate aspects of an overall strategic process, hence the term strategic control is used. [Ref. 74]

In this model, the strategic process is viewed as a discrete direction-setting subprocess, in addition to a continuous sub-process of modification, follow-up, and improvement of this direction. Lorange breaks down the direction-setting sub-process down into a sequence of three steps: (1) Establishment of objectives, (2) strategic programming to identify the steps and the resources required to achieve the intended strategic objectives, and (3) delineation of near-term action for strategic programming in parallel with normal operating activities. To evaluate near and long-term progress toward improved organizational effectiveness and efficiency, the strategic control system simultaneously monitors four interrelated performance dimensions: (1) conventional budgetary control, (2) the annual planning update, (3) specific control of progress towards strategic milestones, and (4) critical environmental analysis.

### 3. Strategic Planning versus Tactical Planning

One traditional way to classify planning is either as strategic or tactical. Strategic planning is generally conducted at the highest levels of management, is of a long-run nature, takes a corporate view, and covers the entire scope of the organization. It requires large amounts of information drawn from outside the organization. This

data relates to the future and by its nature is imprecise. The strategic planning process is continuous, but the timing of the decisions is irregular for it is triggered by the appearance of opportunities or new ideas.

In contrast, tactical planning is conducted at and relates to lower operating management levels, is of shorter duration, takes a functional point of view, and covers the whole of a suborganizational unit responsible for executing parts of strategic plans. Tactical information needs rely more heavily on internally generated data, and involve a proportionally higher use of historical information and records. The tactical planning process is for the most part a periodic cycle that is on a fixed time schedule. Figure A.10 provides a summarized comparison of the two types of planning.

Steiner contends that "control is a multidimensional term and should be defined in a manner similar to the treatment of planning.... Control, like planning, has different meanings for its different dimensions" [Ref. 75]. It follows, then, that just as Lorange developed the concept of strategic control vis-a-vis strategic planning, so too, can a similar control correlation be drawn in terms of tactical planning.

#### 4. Anthony's Planning and Control Model

Anthony identifies three types of planning and control processes in organizations: (1) strategic planning, (2) management control, and (3) operational control. Strategic planning is synonymous with the previous definition and Steiner's conceptualization. Anthony's "management control" and "operational control" fall under the umbrella of tactical control and represent vehicles by which information is fed back to ensure that strategic plans are being carried out. In the management control process, the goals

and broad strategies established in the strategic planning phase are accepted as given; implementation of these strategies constitutes management control: "the process by which management assures that the organization carries out its strategies effectively and efficiently" [Ref. 76].

Management control is a continuous but rhythmic, administrative, and persuasive activity that focuses on the entire organization. This focus implies the need for coordination and integration to assure that all parts of the operation are in balance with one another. In order to coordinate these activities, management needs information about each of them. Although information collected for one purpose or part may differ from that collected for another, the data must be reconcilable between one section of the organization and another. The medium generally used to achieve this compatibility is financial information. This information is of two general types: (1) planned data (programs, budgets, and standards); and (2) actual data or information on what is actually happening both internal and external to the organization.

Examples of activities to which management control applies are the total operation of most corporations including judgment inputs on indirect labor, compensation programs, training, safety, marketing, sales promotion and pricing, most aspects of research and development, and the work of staff units and top management.

Anthony distinguishes operational control as a subset of management control because it occurs within a set of well-defined procedures and rules emanating from management control. Operational control is derived from mathematical models and is "the process of assuring that specific tasks are carried out effectively and efficiently" [Ref. 77]. The process is limited to programmed activities for which the optimum combination of resources to produce a

desired output at the lowest cost is known, and can be reduced to a set of logical rules. These rules prescribe rational actions in the conduct of day-to-day operations. The focus is on single tasks or transactions, and on things, not money. When the operational control rules fail to cover all the aspects of a given problem, an exception surfaces for resolution by human judgment through the management control process.

Examples of activities that are amenable to operational control are automated plants, the direct production operations of most manufacturing plants, production scheduling, inventory control, order receipt and processing, billing, payroll accounting, check handling, and similar paperwork activities. Figure A.11 depicts Anthony's [Ref. 78] model and includes financial and information handling aspects critical to effective organizational planning and control systems.

Steiner relates operational control to tactical planning (control) wherein "Operational control is the same as that part of tactical planning... which is automatic in operation and requires no management attention other than to determine the automatic decision-making formula" [Ref. 79]. In summary, management control encompasses the remaining broad tactical plans of organizational functions aimed at the accomplishment of strategic objectives. The type of control appropriate for the whole of any unit that executes programmed and nonprogrammed activities is management control. The control of the whole accounting department is management control, despite the fact that operational control is appropriate for specific features of the work, such as posting and check writing. Figure A.12 [Ref. 80] presents a synthesis of distinctions between management and operational control.

Anthony describes a management control system also in terms of a structure and a process. The structure is the organizational arrangements and information constructs that facilitate the management control process.

There are two types of structure delineated in the system, namely, a program structure and a responsibility center structure. Even though they are discussed separately, they are in practice interrelated. A program is a product, product line, project, or similar activity that the organization undertakes in order to achieve its goals. The program structure is arranged to collect data on individual programs to facilitate decision-making about resource allocation, to track revenues and costs, and to permit comparative analysis. The second way to classify information is by means of the responsibility center structure. A responsibility center is a subunit of an organization headed by a responsible manager. Information compiled by responsibility center is used for management planning, coordination, and control.

The management control process has both informal and formal characteristics and consists of a set of actions that are prescribed and executed. The key element that differentiates management control from other forms of control, is that the process is not restricted solely to actions, it involves people.

Management control is a process for the use of managers. It involves the interaction of managers with one another and with subordinates. It is a people-oriented process.... Since managers are human beings, psychological considerations are dominant in management control. Activities such as communicating, persuading, exhorting, inspiring, and criticizing are an important part of the process. [Ref. 81]

It is important that the actions prescribed by the structural design of the system are in consonance with the

managers perceived self-interest, as well as in the best interest of the organization. The design of the system should encourage goal congruence so that personal goals of organizational members are, within feasible limits, consistent with the goals of the organization as a whole.

Much of the management control process represents informal communication and interactions which take the form of meetings, conversations, and even body language signals. In addition to these informal interactions, Anthony [Ref. 82] contends that most organizations also have a systematic formal management control system that can be thought of as a series of interlocking subsystems, or phases: one for programming, another for budgeting, yet another for measuring operations, and a final subsystem for reporting and analysis. This concept serves as the foundation for the DOD's current planning, programming, and budgeting system (PPBS). Each of these phases recur in a regular cycle and leads to the next activity. In combination, they form a closed loop as illustrated in Figure A.13.

The programming phase determines the major programs the organization plans to engage in and estimates resource allocation for the coming period. These determinations are made within the context of the previously established goals and strategies, or they represent modifications in strategy. If they fall into the latter category, they are considered part of strategic planning rather than management control; these two processes converge in the programming phase.

A budget is a monetary plan which covers a specified period of time, usually one year. These plans are initially conceived in terms of programs, but in the budgeting phase they are converted into terms of responsibility centers. Thus, the budget serves as a direct interface between the program and the manager responsible for its total or partial execution. The budget represents a bilateral commitment.

Subject to qualification warranted by unforeseen change, the responsibility center managers agree to produce a planned output with a designated amount of resources, and in turn, their superiors agree to consider this level of performance as satisfactory.

During the operating period, records are maintained on resources actually consumed (costs) and outputs actually produced. The structure of the records permit costs to be collected both by program and by responsibility center. The former cost compilation serves as a basis for future programming; the latter is used to measure the responsibility center manager's performance. The operating and measurement phase includes the process of internal auditing which verifies the accuracy of the quantitative information, and serves to discourage theft and deviations from plans and policies.

In the reporting and analysis phase, planned outputs and inputs are compared with actual figures. The results are used to coordinate and control current operations, and to evaluate programs and operating performance. Accounting information, in addition to other data, are aggregated, analyzed, and reported to those organizational members who are responsible for improving performance. If the plan in progress turns out not to be optimum, the budget and the program are revised accordingly. Thus, evaluation of actual performance can recycle back to the first phase in the closed loop management control process.

Operational control, as a subset of management control, likewise has a structure and a process. The structure is restricted to an organizational subunit or a narrowly circumscribed activity and the parameters of a mathematical equation of the operation. The operational

control process occurs within a set of well-defined procedures and rules derived from calculated mathematical optimization estimates and management control influences. This system states what action should be taken and it autocratically makes the decisions. The degree of management involvement is small and focuses on management oversight to improve the operational technique, to detect any unforeseen failure in the operation or change in the conditions on which the technique is predicated, or to determine the need for corrective action.

#### 5. Mautz's Model of Management Control

Mautz [Ref. 83] has developed a management control model that is consistent with Anthony's, but is less elaborate. The model is derived from the findings of an interdisciplinary study of internal control in U.S. corporations, and therefore, draws more from an operational rather than a conceptual context. Mautz does not discriminate between management control and strategic planning or operational control, but instead looks at its relationship vis-a-vis internal control and financial control.

In order to define management control and to distinguish it from internal control, Mautz develops a first conceptualization of management control with ideal employees. This initial conceptualization is based on the following set of assumptions: a set of management conditions which eliminate concern for internal errors and irregularities; prudent, efficient, honest, loyal, and informed employees who are insusceptible to inadvertent errors or lapses of any kind; and employees who, given essential instructions and guidance, are competent and serious performers in accordance with company policies, objectives, and plans. Given these conditions, the minimum basic structural elements of a management control system would be:

1. Establishment of objectives (policy) for the company and its operating components.
2. Communication of objectives to those responsible for implementation.
3. Implementation
  - a. Planning operations to achieve objectives.
  - b. Instructing employees about expected performance.
  - c. Performance
4. Review of accomplishment and consideration of need for modification of plans and policies. [Ref. 84]

His second conceptualization of control is contingent on more realistic conditions and adds those elements which are required because employees are human and subject to the faults and failings of ordinary mortals. In this context, employees require supervision to ensure the utilization and conservation of the company's resources, an adequate supply of reliable, timely information for management decisions and reporting, and performance which contributes to the accomplishment of stated objectives. To reduce the occurrence of employee failure, the management control structure is expanded to include a number of specific practices and procedures tailored to the organization's activities. To facilitate recognition of these additions, they are underlined in the following outline of system elements:

1. Establishment of objectives for the company and its operating components.
2. Communication of objectives to those responsible for implementation.
3. Implementation
  - a. Planning operations to achieve objectives.
  - b. Instructing employees on performance.
  - c. Performance, including supervision of performance.
4. Utilization of precautions, incentives, and deterrents to reduce the probability of errors and irregularities, and of measures to detect the existence of errors and irregularities if these have occurred.
5. Review of accomplishments and consideration of need for modification of plans and policies:
  - a. For effect of outside forces.

b. For any action needed to reduce the probability of internal errors and irregularities.  
[Ref. 85]

A comparison of the two structures reveals internal control as a subset of the management control system. Internal control measures integrate directly into that system once the realistic assumption that employees are subject to errors and irregularities is acknowledged. Closer analysis of the two structures leads to a basic definition of management control as "all measures taken to motivate, encourage, and assist organizational personnel in attaining the organization's goals within organizational policy" [Ref. 86]. The view of internal control as a part of the overall management control system is inferred by the definition of internal control as "those measures designed to remind personnel throughout the company of their duties, to encourage efficiency, prudence, and loyalty, and to provide for timely discovery of errors resulting from inadvertent lapses and deliberate irregularities, should these occur" [Ref. 87]. Whereas the role of management control encompasses policy formulation and planning, internal control is solely the implementation of this policy and the performance of these plans. Viewed from an alternate perspective, management's controls are designed to plan, initiate, encourage, guide, and evaluate an organization's activities. Therefore, any steps taken to affect operations in the attainment of organizational objectives can be included in its overall control system. In contrast, internal control is merely a supplement to basic operations. It represents additional steps taken to limit the occurrence of errors and irregularities during operations. Operations could transpire without internal control, albeit less effectively; without management control, operations could not

exist. Consequently, internal control is no more than a functioning subelement of an organization's total control system.

Even though internal control is separate from management policy formulation and planning, it still relies on management control to give it direction and meaning. Internal control cannot be evaluated in a vacuum. "Unless policy goals in the form of reasonably specific objectives are known, there can be no measures to attain them. Unless operating plans exist, supervision of performance loses its meaning" [Ref. 88].

Two very different concepts of internal control have emerged over time: one advocated by independent accountants and another by management. This divergence is alluded to in the following excerpt:

The purpose of control is to get things done as well as to avoid errors in doing so. Because of that emphasis on accomplishment, management's interest in internal control is more likely to run to activities to be performed, resources to be utilized, and information essential for operational use than would the interests of an auditor concerned with the propriety of financial statements for external use. [Ref. 89]

Due to the legal liability implications of a broader definition, the accounting profession has come to restrict the meaning of internal control to those procedures and records that are concerned with the safeguarding of assets and the reliability of financial records. The accountant's interpretation can be historically traced in official documents and is reasonably clear and specific as to scope and source. From the perspective of corporate management, however, there is no such substantiated support or definitional clarity. The consensus of management opinion views internal control as...

first of all, a management responsibility, a necessity if management is to be effective in obtaining the goals of the corporation. But management sees internal control not as the one-time adoption of a unified system, but as a continuing series of decisions affected by changing circumstances. Any number of events in the life of a corporation call for decisions about more or less internal control. Loss of a key employee, introduction of a new product, expansion into a new market, a business acquisition, a strike...., these and other normal kinds of happenings require attention to determine whether present controls should be reduced, increased, or held constant. [Ref. 90]

In general, therefore, corporate executives criticize restricted views of control on the grounds of limited management application and usefulness; as a consequence, they have defined internal control so broadly as to be synonymous with the concept of management control. Mautz contends that the term internal control "has been used so loosely and in so many ways that it has largely lost its ability to suggest any clear concept whatever" [Ref. 91]. To alleviate any potential confusion, Mautz recommends that independent auditors and managers forego using the phrase "internal control" when relatively precise language is required, and refer instead to "accounting control" or "management control", respectively. The extent to which the expression "internal control" and its relationships have been defined and analyzed, will suffice for purposes of discrimination, and will require no further reference.

An expanded definition of management control reveals its inherent interrelationship with internal accounting control, and is a direct correlate to Anthony's relationship of operational control as a subset of management control. In essence, internal accounting control can be viewed as one of the many diverse forms of operational control. Conversely, management control is found in these features:

Management control integrates with other management responsibilities and with management goals and purposes.

Management control is a broad concept including both positive goal directed activities and error and irregularity reduction measures. It subsumes internal accounting control.

Management control is personnel oriented, directed at facilitating their (employees') success in attaining company goals within company policy. [Ref. 92]

One approach to understanding a control system is to analyze it in terms of various interrelationships. Mautz conceives of any control system as a set of relationships between and among (1) people, (2) activities to be undertaken by the people, (3) resources to which they have access, and (4) reports of their activities and of the condition of the resources as a result of their activities. Both accounting control and management control involves this same set of relationships. Analysis of these four factors in relation to the two concepts serves to reveal similarities and differences between management and accounting control.

(1) People: The duties of each employee should be executed with the intention of goal achievement. Compensation and incentive factors such as a reward system encourages economy and efficiency in the performance of those duties. Control is simultaneously required to assure that personnel do not engage in counterproductive activities either as a result of misunderstanding or for other reasons. Thus, management control encompasses both positive and protective characteristics.

(2) and (3) Access to resources in performance of duties: The achievement of organizational goals requires resource accessibility by appropriate personnel. The organization incurs a risk in utilizing resources to attain the organization's goals. Management "controls" this risk by limiting the number of personnel who have access to resources, by holding them accountable, and by providing instructions on what can and cannot be done with the resources at their disposal.

(4) Operating and resource utilization reports: Management needs operating and resource utilization information to analyze variances from plans and for decision making purposes. Financial information that reflects actions and associated results is recorded and used to meet internal and external reporting needs. To ensure the reliability of the accounting data, management control calls for the separation of certain duties from other incompatible duties to limit direct or indirect interest in misstating or concealing facts about activities and resources.

These factors and interrelationships inherent in management control are diagrammed in Figure A.14 [Ref. 93].

The same analytical approach can be applied for accounting control with some important differences in the results. (1) People: As previously noted, "Accounting control comprises the plan of organization and the procedures and records that are concerned with the safeguarding of assets and the reliability of financial records...." [Ref. 94], and therefore is interested only in those employees whose activities might have bearing on the integrity of assets and financial statements. Likewise, the concern of accounting control relates only to those personnel who participate in the conduct and recording of transactions; consequently, the emphasis runs to appropriate authorization and recording of transactions, not to all duties undertaken.

(2) and (3) Access to resources in performance of duties: Accounting control, based on AICPA definition, is not directly interested in resource utilization for profit purposes. Rather, its major interest in resources is "asset safeguarding".

(4) Operating and resource utilization reports: Accounting control in publicly held corporations exclusively takes responsibility for the reliability and accuracy of

accounting data used for external reporting to shareholders, creditors, and others. In a privately owned corporation, the external reporting requirement is precluded and the accounting data would be used for internal decision making, operational control, and evaluations.

The narrower concept of accounting control is similarly diagrammed in Figure A.15 [Ref. 95]. A comparison of the two diagrams facilitates a more refined understanding of these associated concepts. The more important differences between management control and accounting control are summarized in Figure A.16 [Ref. 96].

## **I. THE CONCEPT OF INTERNAL ADMINISTRATIVE CONTROL**

Every company or other organization engaged in business transactions has two control environments, an outside and an inside environment. The outside environment consists of the public's expectations of appropriate business behavior and other intangible factors which are largely beyond the organization's control. Although we recognize its importance, we do not include the outside environment as part of a company's system of internal control because it is not within the company's control. [Ref. 97]

From the outset, because internal administrative control carries the modifier "internal", it can be inferred that administrative control falls within the scope of the inside organizational control environment. Further differentiation of the administrative control concept requires an expansion of Dalton and Hopwood's definition and its relationship to previously defined control concepts.

Dalton's definition of organizational or administrative controls as those relating to very formal, structured dimensions, implies that every other concept which includes the element of structure in its definition will consequently encompass the administrative control dimension. A review of the previous subsections, confirms that the planning (to

include strategic planning), management control, and operational control systems all consist of a structure and a process; and therefore, incorporate the element of administrative control. By associating the respective control system with the level in which each is generally activated, it is possible to conclude that administrative control cuts across all levels of the organization from the strategic apex, through the middle line and the related analytic and support groups, to the operating core.

Internal administrative coordination and control is derived directly from the use of Mintzberg's elements for structure and design: the five coordinating mechanisms, the component parts and their functions, the systems of flows and their interrelationships, and the design parameters. Not all of these elements, however, pertain to administrative control. Dalton specifically states that only those very formal dimensions are relevant to the concept. Informality, by its random and unpredictable nature, denies structure and is impossible to design. The formal structure, however, can be designed to facilitate these informal interactions. The formal elements which contribute to the administrative control process are standardization; the division of labor into organizational components to delineate the formal hierarchy and the flow of authority; the regulated flow systems of work, control information and decisions, and staff information; and the design parameters of job specialization, behavior formalization, training and indoctrination, unit grouping and unit size, planning and control systems, formal liaison devices, and vertical and horizontal decentralization for decision-making.

Tead's definition of administration suggests that there is more to the concept than the elements of formalized structure.

Administration is the process and agency (administrative division or structure) which is responsible for the determination of the aims for which an organization and its management are to strive, which establishes the broad policies under which they are to operate, and which gives general oversight to the continuing effectiveness of the total operation in reaching the objectives sought. [Ref. 98]

This definition of administration supports applicability to the total organization, and provides additional insights into the existence of a process - a process which determines aims and establishes broad policies prior to management operations and goal achievement. If administration comprises the elements of a structure and a process, it can thereby be logically deduced that an administrative control system will also consist of a structure and a process. This presumption is consistent with the contention that a structure and a process are inherent to management and operational control systems; therefore, these same elements must likewise make up an administrative control system.

Further analysis of the concepts of aims, policies, and oversight will yield a better understanding of the administrative control process.

The devising of the purposes of action provides the 'what-content' of direction.... individuals comprising groups, the groups comprising complexes, and the subordinate complexes comprising superior complexes must in each case have an enterprise purpose, end, or objective.... The devising of methods or procedures to be followed in achieving purposes provides the 'how-', 'when-', and 'where-content' of direction.... the broad and general decisions are made by managers at the top of the hierarchy, and these decisions are made ever more specific by successive subordinates down through that hierarchy. Directive decisions... serve as a basis for the guidance of action. The vast majority of directive decisions are made to guide subordinates in actions which are repeated frequently.... managers have developed numerous devices or tools to be used in providing guidance for repetitive action.... referred to as 'policies', 'procedures', 'practices', 'methods', 'rules', 'regulations', 'routines', 'schedules', 'instructions', 'specifications', 'designs', etc.... These devices are... used by managers as criteria of action, since each of them implies a standard of performance to be attained. [Ref. 99]

These devices for repetitive action are summarized in all forms of standardization, formalization, and training. Standardization achieves coordination and control before the work is undertaken by designing the work processes, outputs, and inputs to meet predetermined desired standards. The fact that all the flows identified in the formal regulated system describe the use of standardization, serves to emphasize the importance of this particular process. Formalization is accomplished by attaching behavior specifications to the task, to the work, or by instituting rules which specify the what-, who-, how-, when-, and where-content for all situations. Both training and indoctrination represent the internalization of predetermined desired or standardized patterns of behavior.

The capability for total organizational oversight is provided in part by the design of information conduits that provide feedback for evaluation of organizational progress and decision-making. Administrative control is therefore implicit in the development of the organization's MIS. As a subset of the MIS, planning and control systems jointly provide direct regulation of outputs and indirect regulation of behavior. The type that is most closely associated with administrative control because of its futuristic orientation and standardized behavior is Mintzberg's "action planning" or the one Newman refers to as "steering control". Action planning determines in advance what specific decisions or actions are required; similarly, steering controls are forward-looking and attempt to adjust the process before the fact. This kind of planning and control system facilitates oversight by reducing the burden for duplication in decision-making, by its preventative nature, and by providing an integrated system of information for management control to affect continuous and postaction monitoring of performance results.

It is possible to deduce that the degree to which standardization and formalization processes are used and considered important within a component part of the organization, is directly proportionate to the degree that administrative control exists at that specific level. Work at the strategic apex is generally characterized by a minimum of repetition and standardization, and considerable discretion; therefore, the strategic apex requires little administrative control. This is consistent with minimum constraint on the strategic formulation process; the small size of the work group; the abstract analysis of non-recurring, ill-structured problems; and the principle focus on information feedback constructs to permit reassessment and modification of strategies and operational tactics.

The use of standardization and formalization processes increase with the shift of orientation to middle management and with descent of the chain of authority. Jobs become more detailed and elaborated, less abstract and aggregated, and more focused on the work flow and operations, thereby requiring more standardization and formalization for coordination and control. Consequently, it is possible to theorize that there is an ever increasing intensity of administrative control as one descends the organizational hierarchy.

Since it is the operating core which actually executes the basic work and which the other parts of the organization seek to protect, standardization is generally carried out furthest here. Specialization, behavior, work, rules formalization, and training are processes also considered critical for coordination and control of the transformation of inputs into outputs. Administrative control is most important and extensive in the operating core.

The various analysts of the technostructure are in reality the "designers of administrative control". These

analysts do not participate directly in the operating work flow but instead design, standardize, plan, or train the personnel who actually do the work. Depending on the administrative control requirement, these analysts' skills may be utilized at every level of the hierarchy. Evidence of administrative control in the technostructure itself is limited due to the professional and task- or function-specificity of the work. The incidence of administrative control, then, relates to the standardization of the analysts' skills, but remains disjointed because of the organization's requirement for a wide diversity of technical expertise. The same conclusion can be drawn in terms of the specialized support units which exist to provide indirect support to the basic missions of the organization.

Interaction between line management and the analysts of the technostructure is essential to the development of an effective administrative control system.

The surprising thing is that those men in companies and universities who have devoted their primary attention to the behavioral and motivational aspects of management have had so little to say about the design and administration of control and management information systems. Because of the pervasiveness of these systems, the controller and the management information systems designer must often make the very decisions which have the greatest impact on motivation and behavior. This comes as no surprise to those who understand the nature and function of control systems well; Robert Anthony makes the point that: 'The central function of a management control system is motivation: the system should be designed in such a way that it assists and guides operating management to make decisions and to act in ways that are consistent with the overall objectives of the organization.' [Ref. 100]

Despite greater emphasis on management involvement in the design and development of management information systems, deficiencies continue to remain in today's environment.

Many managers in business complain that the promises of an information system are rarely achieved. Two reasons contribute to this credibility gap: systems analysts often promise more than they can produce, and managers,

in ignorance of information systems, often expect too much. The computer is not a magic machine that will produce instant results. Misconceptions on the part of business managers and the overenthusiasm of systems analysts reinforce one another with the result that managers feel let down. This can be avoided to some extent if management understands and participates in all the activities in the development of the information system. [Ref. 101]

In order to ensure that the administrative control system suits management control needs and contributes to the accomplishment of organizational objectives, line management must have an input and close interface with the specialists who design the system.

This close relationship between administrative and management control indicates the need for additional refined analysis to differentiate more precisely between administrative control and the concepts of management control and operational control. From Anthony's perspective, it is clear that the starting point for construction of the overall system should be management control because it deals with the ongoing operation of the whole enterprise. Although the management control system is the logical starting point, its relationship to all the other systems must be recognized. The administrative control system as a subset of management control must be designed to take into account the needs of the strategic planners, the line managers, and the individual operators. It can be clearly seen that the administrative control system is closely intertwined with each control concept and serves as the formal framework or glue to integrate the organization.

Despite its inseparable nature and relevance to the whole organization, it is possible for the purpose of theoretical analysis to abstract administrative control aspects from its counterparts. Administrative control represents the design of formalized structure, and predetermined

actions and behavior whose tenets tend to be more stable in nature. This is not to infer that there is no change, it merely suggests that evaluation and change are not as dynamic and continuous as that evidenced in management control. Change in administrative control occurs both on a rhythmic cycle as a result of regular planning, and on an irregular cycle as a new or modified approach is deemed necessary. Information collected from the system focuses on both money and things, but from the orientation of compliance to predetermined standards aimed at economy and efficiency, rather than that of financial or overall performance. Administrative control is strictly formal and draws from common expectations of how people react in given situations, but stops short of actual operation and execution. Several disciplines are relied on in the design and implementation of an administrative control system and the technical skill requirements are tailored to the nature of the work. Administrative control involves some judgment as to what and how to standardize, but it also relies on analysis of historical data by technical specialists to ensure the system is not only feasible, but also designed for economy and efficiency. Management control, on the other hand, is both formal and informal, deals directly in human interactions, relies on an understanding of social psychology in motivating people to achieve desired results, and relates to current operations. Management control tends to be generally "yes-no" and postactive in nature and depends a great deal on subjective judgment and a knowledge of people. Figure A.17 summarizes distinctions between management and administrative control systems.

Just as operational control is a subset of management control, so is it a subset of administrative control. The two concepts are distinguished by the strict reliance of operational control on mathematical models for monitoring

the output of specific tasks, as compared to the emphasis of administrative control on both quantifiable and nonquantifiable aspects; dependence on disciplines other than mathematics in the processes of structural design, standardization, and formalization; its applicability to whole organizational units, subunits, functions, or tasks; and its measurement in terms of compliance and economy and efficiency. Operational control is so highly automated as to be computerized; the results of administrative control are not as highly assured because of the limitations of judgment in the design and structure process, in the presumption of expected human actions in given situations, and in the interpretation of the specified actions and standards prior to execution. A summary of characteristics which distinguish operational and administrative control is provided in Figure A.18.

Administrative control can be defined, therefore, as the process of designing the appropriate structure and specifying predetermined decisions or actions through which management assures that the organization carries out its goals and objectives efficiently and effectively.

#### F. SUMMARY

A lack of clear, current, and comprehensive information on the subject of internal control necessitates reliance on the basic definition of control -- comparing reality with a standard -- and on an understanding of its close relationship to planning, as points of departure for further comparative analysis and development of related control concepts. The study of this basic definition in an organizational context yields three underlying interdependent dimensions: organizational structure and design, human interactive behavior, and a continuum of formality. Additional analysis

identifies the characteristic of time as yet another descriptor of control systems. Combinations of these dimensions in varying levels of importance and pervasiveness serve to distinguish the broad concept of management control from its subsets of administrative and operational control.

In the final analysis, management control is both a continuous and retrospective process which integrates structure, money, things and people in the efficient and effective accomplishment of organizational strategies and goals. Operational control tracks things and performance and is restricted to specific programmed activities capable of mathematical solution by a set of logical rules to assure individual transactions are executed efficiently and effectively. Administrative control evolves as the critical integrating "glue" of the organization that assists management in its role -- it is the formal design of the organization's structural framework and the predetermination of standardized decisions and actions which render organizational identity and purpose and assure economy and efficiency in operations.

The success of the organization hinges on the administrative control elements of organizational structure and design in integrating coordination, communication, and control. The effectiveness of this integration process is directly related to the quality of interactions among the designers, managers, and employees, and the extent to which management understands and participates in its development.

#### IV. ADMINISTRATIVE CONTROL CRITERIA APPLICATION AND EVALUATION

##### **1. INTRODUCTION**

Inherent to the establishment of control systems is the development of control criteria or guidelines that enable managers to assure the accuracy and reliability of their internal information and to determine how effectively and efficiently an activity is discharging its responsibilities. These criteria therefore must be management oriented, applicable to a wide range of organizational types and sizes, and useful to control system evaluation. The criteria represent a set of guidelines descriptive of satisfactory and attainable practice, and permit comparison with current operating procedures for subsequent evaluation and identification of areas requiring improved control.

##### **II. CONTROL CRITERIA DEVELOPMENT AND APPLICATION BY COMPONENT**

Internal control criteria could conceivably be based on control practices and procedures, on objectives, or on the components and elements of control systems. Mautz adopts the latter approach and contends:

Any complete system of internal control, whether management, (administrative), or accounting, is comprised of four essential and interrelated components:

- (1) the internal control environment,
- (2) internal control risk analysis,
- (3) internal control practices (techniques),
- (4) internal control monitoring.

Effective implementation of the components and constituent elements of a system of internal control depends on

careful analysis of a variety of characteristics of the specific organization and of the conditions in which it operates. Recognition that internal control systems can be analyzed in terms of their essential components and the constituent elements of those components provides a conceptual and a practical basis for establishing criteria for the evaluation of internal control systems. These criteria may be applied to systems of accounting control, (administrative control), or to systems of management control. [Ref. 102]

Following this logic, these four components will be analyzed and broken down into elements to provide a basis for the development of related internal control criteria.

The internal control environment is created by the organization's personnel, and in particular by the leadership at the highest level. Mautz's research supported the contention that:

The control environment was what it was because the chief executive officer either took a keen interest in it or set such an example that no one wanted to question the company's standards...(and) in some instances...controllers consider it to be their duty continually to remind other members of the organization of what is expected of them. [Ref. 103]

There is another aspect of the control environment which recognizes that people are responsive not only to positive stimuli but to negative ones as well. "If the actual activities of the leaders in the organization contradict their statements, the attitude and activities of others in the organization will be affected adversely" [Ref. 104]. Consequently, appropriate positive action, of and by itself, is insufficient to guarantee a desirable internal control environment; the absence of any negative actions that tend to override or discredit the positive efforts is considered to be of equal importance. In sum, the elements of a satisfactory control environment include:

Positive, recurring action at the appropriate executive levels to impress on all officers and employees the nature and importance of control, and... avoids any

emphasis from within the organization that tends to override control measures or that negates established policy on control. [Ref. 105]

The essence of these elements is derived from the importance of communication. Managers must directly or indirectly convey their control expectations and feelings to ensure that all members have a common understanding of organizational purposes and policies, and to emphasize standards of honesty and integrity in utilizing and preserving the organization's resources. Several vehicles communicate management's expectations on control: a formal code of conduct, training program emphasis, open letters to the work force, distribution of published comments by top management, reports of action taken in response to transgressions, commentary on other organization's experiences - all serve to carry the desired message to the members of the organization [Ref. 106]. Communication must be a two-way process, however, in order to assess subordinate understanding and commitment. Occasional questionnaires or personal interviews, a suggestion box, or question and answer sessions in training programs permit employees to report their views, observations, and understanding of the organization's goals and policies, and allow management to rectify any misconceptions as well as to gauge the general internal control environment attitude. Appendix C provides an example of a general control environment analysis questionnaire developed and implemented by the Navy Finance Center at the end of 1983.

The frequency for reinforcing these control expectations and standards depends on the nature of the work force and the nature of the activities performed by the organization. The higher the rate of turnover, the greater the need for reminders. A different response is required when work opportunities are limited, the population is stable, and

people know each other well than when the organization hires from a large metropolitan area and the people view employment with a specific organization as one possibility among many. Another influence rests with the sensitivity of activities performed and the extent to which the employees are subject to temptation.

The internal control environment is influenced by conditions, people, morale, ethical standards, and personal attitudes which change over time and therefore warrant periodic assessment to determine the extent and nature of that effect on the environment. To monitor and respond to these changes, Mautz recommends the designation of an individual from top management as responsible agent for maintenance of a satisfactory control environment on a programmed basis.

The second component is the process of risk analysis to identify and evaluate the internal control risks faced by the organization.

Internal control risks are influenced by the nature of the ... activity, by the quality of the labor markets..., by the nature of the... organizational structure, by the controllable and noncontrollable internal control environments, and by a variety of circumstances and events beyond the control of the (organization). [Ref. 107]

In addition to consideration of the organization's circumstances, risk analysis must also recognize both the need to encourage members to pursue objectives within the scope of organizational policies, and the possibilities for the occurrence of errors and irregularities. This analysis of the organization can be performed on a position by position, or on a function by function basis. Mautz recommends consideration of both because "the position by position review is helpful in identifying those positions that are most sensitive to error and irregularity and therefore most in need of attention (and) the functional approach relates

more readily to accomplishing the purposes of the company" [Ref. 108].

The position and functional analysis of the organization will yield a lengthy list of risks which must be evaluated on three dimensions: ...

(1) recognition, identification, and analysis of the effect of strains placed on human fallibility by the characteristics of the industry, the company, and its personnel, all from the standpoint of attaining (organizational) goals;

(2) assessment of the probable impact on the company if recognized risk should be realized; and

(3) consideration of the extent to which risk can be reduced by appropriate control measures. [Ref. 109]

Each of the risks cannot and should not be granted equal attention. Even if only relative measures are available for evaluation, each risk should be gauged on the basis of its impact on the organization, its probability of occurrence, and its susceptibility to control. Unless cost or nonaffectability by control preempts corrective action, some form of restraint should be initiated on a priority basis for those risks ranked high in terms of probability and critical organizational impact.

Cost-benefit analysis is a general term which applies to all techniques used to examine alternatives and select the one that yields the greatest return for a given outlay. The authors of the Price Waterhouse Guide to Accounting Controls present a systematic, but nontechnical approach to the use of cost-benefit analysis in determining redundancy, or the need for initiation of controls to eliminate or reduce weakness. In brief, the approach consists of the following steps:

- (1) Make a preliminary assessment of the exposure
  - (a) Estimate worst case exposure
  - (b) Use structured techniques for estimation

- (2) Accumulate data and quantify the readily quantifiable elements
- (3) Establish a range of exposure
- (4) Narrow the range
  - (a) Use multiple opinions to establish most likely exposure
  - (b) Rank intangible elements
  - (c) Assign monetary values to intangibles
  - (d) Accumulate additional evidence, if needed
- (5) Make a post-analysis challenge of the decision
- (6) Document the decision reached [Ref. 110]

This approach is practical and makes efficient use of limited resources in several ways: it focuses the available time on significant problems by seeking solutions first for the greatest known exposures; it uses easy methods and subsequently brings in technical approaches (mathematical modeling, decision theory) - if a solution is elusive; it allows that decisions can often be made without detailed consideration of intangible, qualitative factors by first assigning monetary values to the quantifiable factors and reserving the others for later analysis; and it considers the cost of the time devoted to the analysis [Ref. 111].

The third component is the selection of appropriate internal control procedures or techniques to counter the control risks identified in the previous phase. It is helpful to regard these control techniques as prudent practices consciously implemented to achieve desired results and avoid undesirable effects. Therefore, "any practice or device that can be used as an incentive to motivate personnel positively, as a deterrent to prevent or reduce the probability of counterproductive actions, as a precaution to avoid or reduce the existence of risk, or as a means to effect timely discovery of undesirable acts of either omission or commission, may be included as an internal control procedure" [Ref. 112]. The seven internal control techniques published in the Journal of Accountancy in 1955

plus an eighth technique added by Mautz [Ref. 113], singly or in combination, support classification in terms of incentives, deterrents, and precautions:

- |                  |                            |
|------------------|----------------------------|
| (1) Organization | (5) Training               |
| (2) Review       | (6) Protective Devices     |
| (3) Reporting    | (7) Clerical Proof Devices |
| (4) Records      | (8) Rewards                |

These eight control techniques will be examined in greater detail in a subsequent subsection. It bears summarizing, however, that two elements in the process of a satisfactory matching of internal control procedures or techniques with identifiable internal control risks emerge: the selection of control procedures to counter those risks susceptible to avoidance, reduction, and/or discovery, on a timely and cost-effective basis; and the choice of one or more procedures appropriate to each controllable risk because procedures addressing no identifiable risk represent inefficiency and waste [Ref. 114].

The fourth and final system component is that of monitoring control procedures. The purpose of monitoring is not only to assure satisfactory application of procedures by responsible members but also to periodically review the adequacy and suitability of these internal control procedures. To be effective and reliable, the monitoring process must be performed by an individual who is technically competent, unbiased, and positive towards the role and responsibility, and who can exercise remedial action if deemed appropriate. Just as the concept of independence is critical to the auditor, the monitor must be independent both of the person executing the control procedure and of the person or persons to whom the internal control technique applies. Due to the degree of varying circumstances, conditions, and intangibles present in so many diverse aspects of internal

control, management's subjective judgment and common sense have become primary catalysts to the success of any control determination [Ref. 115].

In many organizations, an internal audit function is established to monitor the internal control systems. However, the existence or non-existence of an internal audit department does not necessarily represent the extent or effectiveness of the monitoring activity. Participation does not have to be restricted solely to that department. It is feasible to assume that monitoring can also be performed by the controllers staff, by review committees, by statistical comparison of similar activities and units, or by regulatory and supervisory agencies. Mautz contends that "internal auditing is a very effective source of monitoring in many instances (but) it can be supplemented or even replaced by other practices and procedures" [Ref. 116].

The implementation of internal control procedures in a given set of circumstances must consider an organization's goals, policies, and the implications of conditions in the external environment. Application of these control criteria is accomplished effectively and economically through the analysis of the essential elements of each of four components in any internal control system. This process involves a great degree of judgment and the analysis of numerous variables. The success of resultant control determinations can only be judiciously measured within the context of the organization's specific situation and the competition for limited resources.

### C. CONTROL TECHNIQUES

Any undertaking presumes a goal to be achieved, and certain devices or techniques for accomplishing this goal.

Just as success in attaining the goal depends on the knowledge, skill, and judgment used in applying the related tools, the effectiveness of an internal control system likewise reflects the skill with which control techniques are used in the construction and continuous update of the system. These techniques were referred to in the previous section and a short explanation of each one will assist in explaining their nature and relevancy.

It has already been established that organization is vital to the success of the entity and is a most basic and important tool in the construction and design of a control system. Without a sound structure, other techniques such as review and reporting are without direction and cannot be implemented effectively. To achieve a satisfactory level of internal control, organization must provide clear levels and lines of authority, delegation of duties, and recognition of fixed responsibilities. A formalized organization chart communicates these direct lines of authority and responsibility and reflects the division and specialization of labor unique to a specific entity. When organization is viewed in the context of functions, the method of flow charting serves to outline the organizational body of controls. The flow chart process identifies and structures control points which describe a particular role or responsibility, procedural steps, and/or transaction flow. Appendix D illustrates a flow chart diagram of a simple administrative function.

Another key internal control concern in organization is the separation of incompatible duties. There are specific functions within each organization which, if performed by a single person, could encourage the possibility of errors and irregularities. As a general rule, Mautz considers the following as incompatible duties:

- (1) Performance of an act or operation and authorization or recording of that act or operation.

(2) Custodianship or access to property and the keeping of records of that property. [Ref. 117]

The assignment of duties and the delineation of responsibility and authority do not in and of themselves preclude circumvention of controls, untimely execution, or performance outside the scope of the tasks; the provision of review or supervision is therefore initiated to discover whether the assignment is performed satisfactorily.

The technique of review may be activated before or after the execution of an activity or transaction. The timing serves different purposes: prereview is aimed at preventing improper or unauthorized transactions before they take place; postreview provides a means of uncovering unauthorized or improper actions after their execution and indirectly influences their prevention by acting as a deterrent [Ref. 118]. Both types of review can serve to substantiate omitted duties. Regardless of the type of review, however, there are two requirements applicable to both:

The first is that the review be sufficiently thorough and complete to disclose errors and irregularities. This means that those who perform review functions must know the purpose of the review, must perform it conscientiously, and must be free from any pressure that might have a weakening effect on their review. This brings us to the second requirement: the review must be independent. That is, the reviewer must (1) be free of any kind of control or other retaliatory action from the person reviewed, and (2) be free of any bias or self-interest that might influence him to overlook error or irregularities discovered. Unless these requirements are provided, review cannot be considered to contribute fully to the internal control. [Ref. 119]

According to Mattz there are two classes of reports: information and responsibility. Information reports contain data about the status of the organization's finances and the results of operations. Balance sheets, income statements, production statements, forecasts, and variance analysis reports are examples of this class of report. The purpose

of responsibility reports is to indicate the completion of a given action or duty and the acceptance of responsibility for its satisfactory performance. The action may be the review of an invoice, document, or procedure, the preparation of a reporter evaluation, or the execution of an operation; the indication usually takes the form of a signature, initials, or an inspection or audit report. It stands to reason that if reporting requirements for a particular task exist, then failure to report the performance of that task is an error that will be brought to light and should reduce future occurrences.

"Records are so fundamental that without them control would be impossible" [Ref. 120]. The technique of records represents the collection, classification, and summarization of data and information needed by the organization for control, coordination, and evaluation. Records support information reports by permitting data verification and review, indicate custodial accountability and access to assets, and track cash and investment flows. All files, documents, and memoranda are examples of records which contribute to the maintenance of an effective control system.

Employees must be educated on their duties and responsibilities, and the standards of performance expected by management. This is achieved through training and indoctrination programs which:

(1) acquaint... each employee with the responsibilities of his job... (to include) his specific duties, how they are to be performed, and his relations to superiors and subordinates alike.

(2) explain... to each employee the relationship of his duties to the over-all... objectives and policies so he can see the interrelationship of his work with that of others.

(3) prepare... each employee for advancement both to improve employee morale and efficiency and to protect... against the untimely loss of trained workers.  
[Ref. 121]

In effect, members cannot make up an organization without some kind of training and only with sufficient training are control and coordination possible.

Numerous protective devices have been developed to assist in the safeguarding of assets: locking cash drawers and files cabinets, secure storerooms, vaults, safes, encrypted combination locks, the services of banking, trust, and security companies, controlled requisition systems, security badge systems. Protection against natural catastrophes such as fire, flooding, earthquakes, spoilage, and deterioration must also be considered. This can be accomplished by sprinkling and alarm systems; insurance coverage; formal natural disaster procedures and emergency training; regular, frequent deposits of tangible assets; shutdown devices; and alternate backup sites, equipment, and documentation. Additionally, these devices inhibit unauthorized transactions, theft, security breaches, and manipulation of data and assets for ulterior motives. The safeguarding of assets through the use of appropriate protective devices is fundamental in any system of internal control.

There are also a variety of clerical devices designed to ensure accuracy in the records by preventing unintentional errors or by making the commission of irregularities more difficult. Many of these devices are mechanical: calculators, adding machines, memory typewriters, computers, cash registers, and bookkeeping machines; others are nonmechanical, such as the double-entry bookkeeping system, OCR and other printed forms, preprinted "turnaround" documents, NCR documents that provide automatic copies, books of original entry requiring cross-footing, established documentation procedures, independent duplicate verification of calculations. The list of available clerical devices is virtually infinite in length. It is clear that this technique contributes to the attainment of good internal control.

In support of the emphasis on internal control as a positive, constructive force in the achievement of organizational objectives is the concept of rewards. Rewards come in many forms: salary increases, commissions, bonuses, and other means of personal compensation; titles, status increases, symbolic awards, and other types of recognition; promotions, increased responsibility and authority, and other methods of conferring personal power [Ref. 122]. All these factors have strong motivational influences which serve to both encourage desired action and curtail that which is undesirable.

It can be observed that these basic techniques which provide the basis for effective internal control procedures have a wide range of applications and are highly interrelated and interdependent in their actual implementation and usefulness. Mautz summarizes these characteristics in the following illustration:

Provision of adequate review depends directly on appropriate organization and the requirement of responsibility reports. Also, a system of accounting records may be provided, but unless a variety of clerical proof devices is employed to give some assurance of accuracy, the data produced by the records are not likely to be reliable. Even protective devices such as storerooms, safes, and cash drawers are essential if the accounting records are to be dependable. If unauthorized transactions are possible, records are unlikely to be reliable, and the greater the probability of unauthorized transactions, the less reliable will be the data provided by the records. Accounting control without physical control may be possible, but it is extremely unlikely. It is important to note that protective devices, therefore, are important to the supplying of useful information as well as to safeguarding the assets. [Ref. 123]

#### D. CONTROL CRITERIA DEVELOPMENT AND APPLICATION BY FUNCTION

The Price Waterhouse (PW) approach represents an alternative to Mautz's derivation of control criteria from

control system components. The PW model explicitly addresses the concept of internal administrative control in the development of criteria based on control objectives for each organizational function in a transaction system. The overall PW approach emphasizes five significant aspects: understanding the business, financial reporting considerations, internal accounting controls, cost-benefit analysis, and administrative controls. These administrative controls are differentiated by their influence on the establishment of an appropriate control environment, on the nature of internal accounting control procedures, and on the satisfaction of internal accounting control objectives [Ref. 124]. The obvious emphasis on accounting control is attributed to the fact that Price Waterhouse is in the business of providing auditing and accounting services. Nonetheless, it recognizes a broader definition of internal control and advances the notion that any control that bears upon the reliability of financial statements, regardless of its classification as an accounting or administrative control, is important to the effective implementation and evaluation of the control system as a whole. In this model, administrative controls are described as those "which surround all business activities (through which) management seeks to discharge (its) responsibility ... by establishing specific administrative controls designed with that activity in mind." [Ref. 125]

In this model, administrative controls are grouped into the following categories:

- (1) Organization controls - controls achieved by the manner in which (an organization) assigns responsibility and assigns authority.
- (2) Operating controls - control achieved through adherence to policies and procedures within the organization.
- (3) Information system controls - control achieved through providing information to appropriate levels of management. [Ref. 126]

It is apparent that this categorization directly correlates with and reinforces the elements of the internal administrative control definition developed in the previous chapter.

The first category of organization controls focuses on the control techniques of organization structure and delegation of authority and have as their objectives encouraging adherence to corporate policies and procedures, and providing for an orderly authorization process. The organizational structure provides guidance relative to reporting relationships, and functional responsibilities and limitations of authority of key individuals. Effective communication of these assignments and limitations, in addition to consideration for the competency of individuals and the potential for override of authority are all keys to well controlled operations. Both structural design and the delegation and flow of authority within this framework establish the parameters for the decision making process. The authors of the The Guide to Accounting Controls view the following as characteristics of effective organization controls if:

- (1) Organization structure supports management's overall goals.
- (2) Framework for delegation, and limitation, of authority is well defined.
- (3) Functional assignment of responsibilities is logical.
- (4) Assignment of responsibilities is clear.
- (5) Authority is delegated commensurate with responsibilities.
- (6) Adequate and competent supervision and staffing is available with appropriate coordination and communication among functions. [Ref. 127]

Operating control techniques are regarded as policies and procedures of an organization which provide the framework within which other activities are planned, executed, and controlled. The operating control system represents a means

of communicating goals, objectives, and accountability for application in the planning and evaluation process, and helps to ensure that transactions are preapproved and within delegated authorization limits. Desirable characteristics of operating controls are:

- (1) Suited to the organization structure and aid in carrying out delegated responsibilities.
- (2) Well defined, clear and documented.
- (3) Well conceived and practical to carry out.
- (4) Easy to interpret and apply. [Ref. 128]

Management's knowledge and understanding of past, present, and proposed activities and transactions depend in varying degrees on the organization's information system. This information contributes to discipline and environmental incentives for compliance in day-to-day evaluation and decision making. The information system monitors the organization's "pulse" for executive managers who cannot be present to witness each transaction or be aware of each decision generated at various levels throughout the organization. PW recommends that the review process should weigh score of the following characteristics of an information system:

- (1) Information is sufficiently detailed to identify out-of-line operations or point to possible problems having internal control implications.
- (2) Content of the report is relevant to the user.
- (3) Form of presentation highlights important information and aids understanding.
- (4) Information is timely and reliable enough to be useful for its intended purposes.
- (5) Distribution matches the assigned responsibilities of individuals in positions to know that the information makes sense in the light of their familiarity with what happened.
- (6) Information is actually used by recipients with the competence and time to understand its significance and in a position to take action, if necessary, to determine if there has been a breakdown in internal accounting control. [Ref. 129]

In illustration of the FW model, condensed descriptions of some realistic and desirable administrative controls are provided for the functional area of productive assets. In general, the objectives of concern in this area are designed to ensure appropriate productive capacity acquisition in light of organizational needs, effective allocation of funds in aggregate and by product, productive use of existing assets, and adequate protection of productive assets from physical loss or deterioration [Ref. 130].

Administrative organizational controls for productive assets are derived from analysis of the significance of the assets to the organization's operations; the size, technological complexity, and acquisition lead times of proposed projects; and the procurement expertise of the organization.

These factors will determine the formality of the organizational structure needed, including the level of management involvement and approval, and the scope and nature of the organizational functions and activities required to control productive assets. The reviewer should understand how the administrative functions are delegated and coordinated with other... activities. The organization structure and the delegation of authority within the structure establish the framework within which capital spending decisions are reached [Ref. 131]

To ensure that appropriate methods are followed, management implements and enforces various administrative operating controls in the form of formal policies and procedures which provide assistance in planning, control, procurement, and maintenance of the organization's productive assets and set the framework to facilitate the execution of other procedures and activities. FW identifies significant areas where policies and procedures for productive assets would contribute to effective management control as: "acquisition and disposal of productive assets, capitalization of costs, leasing versus purchasing of assets, custody and use of assets, and evaluating potential and actual results of

acquiring capital assets" [Ref. 132]. Specific policies to support these areas are classified in terms of productive asset planning, project management, and operation. Administrative operating policies and procedures in the area of planning consider long and short range planning and budgeting; and the proposal, evaluation and approval of capital projects. Project management policies are developed as they relate to the asset procurement and monitoring processes. Policies in the operation of assets involve the custody and protection of assets from loss, the evaluation of asset utilization and productivity, maintenance and repair, and salvage and disposal [Ref. 133].

Information for planning and controlling productive asset procurement also serves as an effective administrative control.

The information system for acquiring and using productive assets should be sufficient to enable management to direct and control the activities and plan for the future. Previous consideration of the unique business attributes and review of organization and operating controls should provide insight as to the type of information needed, and when and how often it is needed. [Ref. 134]

To be useful, this information must be detailed sufficiently to track projects which are proposed, authorized, and in progress, and to identify out-of-control or potential problem areas. The information must also be distributed to the appropriate responsible agent in a form which facilitates rather than obstructs understanding, and must be timely and reliable enough to suit its intended purposes. Data on both requirements and progress in satisfying these requirements are provided by long and short range capital plans and budgets. Control information is also collected by project to assist in resource allocation and the evaluation of results. Other operating information is provided by

means of maintenance, productive assets, and statistical data reports. Appendix E represents an adaptation of Volume 6 of the Guide to Accounting Controls and illustrates a comprehensive breakdown of administrative organization, operating, and information system controls into subactivities for ease of reference and application to the area of productive assets. An additional example of administrative controls delineated by function is furnished by the Navy Finance Center in Appendix F.

#### F. INTERNAL CONTROL SYSTEM EVALUATION

The evaluation and review of the control system revolves around obtaining information about the organization and its procedures by means of discussion with appropriate management personnel and studying documentation such as procedures manuals, job descriptions, flowcharts and decision tables. The development of a program or plan is an effective approach to organize the evaluation process and systematically collect the required information. Of equal importance to the evaluation plan is documentation of the results of the review, to include overall internal control objectives, judgments on internal and external environmental factors, administrative control procedures, and flowcharts or other descriptions of the procedures and segregation of duties. A consolidated adaptation of the evaluation program advocated by Price Waterhouse [Ref. 135] follows:

- (1) Gain an understanding of the unique attributes and risks inherent in the business.
- (2) Identify those functions and people that are important to processing transactions.
- (3) Consider the organizational financial reporting needs.

(4) Identify and consider those aspects of administrative controls which establish an appropriate control environment, influence the nature of other control procedures, or help to satisfy control objectives.

(5) Consider whether the control environment provides reasonable assurance to management and others that control objectives will be achieved.

(6) State the control objectives for each function in light of the unique attributes, risks, and administrative controls.

(7) Obtain an understanding of the transaction processing system by a preliminary survey.

(8) Evaluate whether there is an appropriate segregation of duties within and among functions and whether administrative and other internal control procedures will provide reasonable assurance that the control objectives will be achieved.

(9) Identify any objectives which will not be achieved due to weaknesses, and the appropriate control procedures which should be instituted to eliminate any identified weaknesses.

(10) Confirm the evaluation by testing for compliance those controls which are most likely to achieve internal control objectives.

(11) Recommend procedures be instituted to eliminate any identified weaknesses when a cost-benefit analysis indicates that it is practicable to do so.

(12) Conclude and prepare a summary report on the results of the evaluation.

The method of testing compliance with administrative controls depends on the specific nature of the controls but

will likely involve inquiry, observation, and inspection of documentation [Ref. 136]. Administrative organization controls can be tested for compliance through discussion of the lines of authority and assigned duties with members of the various departments and through observation of the performance of those duties. The results of this exchange of information may then be compared with organization charts, job descriptions, and policy and procedures manuals. Administrative operating controls likewise lend themselves to compliance testing by determining whether operating policies and procedures affecting critical functions and transactions are being implemented. These tests involve the examination of documentation for associated indications of verification or approval (authorized signatures or initials), and observation to gauge timeliness, efficiency, and separation of incompatible duties. Testing compliance with information system controls presumes an understanding of actual information utilization for control purposes. Discussion with employees to determine their interpretation of a report's utility, content, and resultant actions or questions will provide a basis for the evaluation of the control effect of the particular report. The most effective test plan for a computer system most likely will involve the use of that system. The computer, operating under the control test program designed by the reviewer, can be used to select items for test, make comparative analyses, execute mathematical calculations, and to generate exception data. The evaluator can then investigate the exceptions and evaluate the overall implications of the test results [Ref. 137].

AD-A147 610

INTERNAL ADMINISTRATIVE CONTROL: ITS APPLICABILITY TO  
THE MARINE CORPS(U) NAVAL POSTGRADUATE SCHOOL MONTEREY  
CA C F ILLIG ET AL. JUN 84

2/2

UNCLASSIFIED

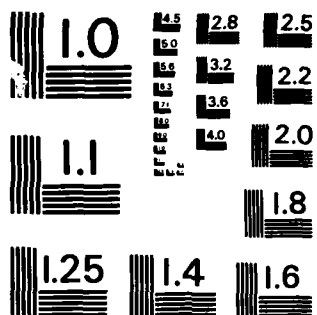
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FORMED

OPIC



MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A

## F. SUMMARY

The criteria for control depend on the size, dispersion, complexity, management philosophy, structure and grouping of an organization. Larger organizations require more detailed formal documentation and communication of policies, procedures, standards, and control systems for the effective and efficient achievement of control objectives. The development of control criteria can be based on their application to control system components or functional control objectives as deemed appropriate to the particular organization. Regardless of the approach, emphasis must be placed on the establishment of an environment that creates the appropriate control awareness, attitude and discipline. Paramount to success is the design of a control system (whether it be management, administrative, or operational) which fits the structure and management philosophy of the organization, which focuses on the areas of risk inherent to its goals and mission, and which strikes a balance between the costs and benefits of control. A precursor to evaluation is a review of current administrative controls to gain an understanding of the control environment and the organization's mission and practices. In evaluating the effectiveness of an internal control system, the main thrust of testing should be directed to the execution of those procedures which are critical to meeting the organization's goals and objectives. Compliance tests are conducted to ensure that the control system is operating as intended and are most pertinent to the evaluation of administrative controls. These tests involve the examination of documentation, discussions with management and employees, and observation of the performance of duties. If the results of the compliance tests reveal that performance and controls deviate from that which is desired, corrective action is required to modify controls in

light of possible internal and external environmental changes, or to remphasize prescribed procedures and heighten control awareness for greater assurance of compliance in the future.

## V. AN OPERATIONAL DEFINITION OF ADMINISTRATIVE CONTROL

Marine Corps Order 5200.24 , Establishment, Maintenance, Review and Improvement of Management Control Systems, defines administrative control as:

Administrative controls provide the organizational structure and parameters through which missions and goals are achieved and coordination and cohesiveness are maintained. They are designed to assure adherence to applicable laws, regulations and policies and to promote operational economy and efficiency. Establishment and maintenance of administrative control is a command/management/supervisory responsibility applicable to all functional areas throughout an organization. Administrative controls generally have an effect on employee awareness of individual responsibility, create a positive organizational attitude, act as an incentive to employees to follow procedures, and provide reasonable assurance that the failure to perform assigned procedures will result in appropriate disciplinary action. Command/management/supervisory decisions pertaining to administrative control can have a direct influence on the quality and adequacy of accounting controls. Some administrative control procedures can also have a significant influence on the type of accounting controls employed.

The Marine Corps' definition of administrative control is an all encompassing definition which incorporates management control, administrative control, and operational control as it relates to people, structure, process and the breadth of focus in the organization. Administrative control, as developed in Chapter 3 and restated here, is:

The process of designing the appropriate structure and specifying predetermined decisions or actions through which management assures that the organization carries out its goals and objectives efficiently and effectively.

Predetermined structure and process (what an organization is and what it does) are not new to the Marine Corps. All federal organizations possess mission statements and

Tables of Organization (T/O's) which predetermine structure and provide an inherent element of administrative control. The formation of new organizations are guided by doctrine, such as Fleet Marine Force Manual (FMFM) Q-1 which establishes procedures for the formation of Marine Air Ground Task Forces, providing them first with a mission statement and then with an organizational structure tailored to meet that predetermined requirement. Due to the high degree of decentralization in the Marine Corps, standardization in the form of Commandant of the Marine Corps (CMC) White Letters, Standard Operating Procedures (SOP's), User Manuals, Policy Memorandums, Desktop Procedures, Turnover Files, Operations Plans and Orders, Command/Organization/Unit orders and directives, etc., provide additional administrative controls. SOP's, as an example, predetermine structure and process through standardization of all administrative and operational aspects of a function; establishment of satisfactory performance levels and training requirements for individuals; establishment of satisfactory performance levels of functions; affixing responsibility, accountability and authority for performance and decision-making; establishment of methods for coordination between echelons of command, both internal and external to the organization, and, interface between differing functions within the organization; establishment of methods to evaluate performance; and establishment of a mechanism to report status and results. MCO P5215.1F, The Marine Corps Directive System, requires the establishment of a minimum number of subordinate command directives to ensure consistency (control) with Headquarters guidance. Each of these directives should be localized to meet the organization's needs and to supplement the achievement of efficiency--maximum output from a given quantity of input--and effectiveness--how well an organization does its job.

Predetermined structure and process suggest a somewhat static control environment, one that previously exists which requires little action from the command/management/supervisory personnel responsible for the function. Nevertheless, predetermined structure and process is but one small portion of the overall dynamic management control system. MCO 5600.31, Publication and Printing Regulations, provides for the review and subsequent certification that directives (administrative controls) are current and reflect the operations as actually performed in the organization. Additionally, the Marine Corps Manual, in paragraph 1011.3, provides that commanders shall "make or cause to be made such inspections as are necessary to evaluate all functional areas of their commands and to keep themselves informed, at all times, of the overall condition of their command." The Marine Corps has identified, as a prelude to the establishment of an effective management control program, some 35 functional areas varying in degrees of risk, that must be reviewed for program implementation. Reviews, like inspections, cannot be conducted by seat-of-the-pants analysis, but rather by ambulatory management with active participation by those directly and indirectly effected. The dynamics of this management control system encompass the entire organization and impact on the static nature of administrative control.

In order to determine the effectiveness of the controls in a functional area, an evaluation (management control review) must be made to compare the performance of the individual tasks involved in the functional area, as well as the functional area in toto, with the predetermined standard. The evaluation should also consider the reliability of the standard, i.e., before an inspection is conducted to compare the performance of a functional area with the standards set forth in the SOP, it should be determined if the SCP is

current and complies with guidance from higher headquarters. There are many vehicles in the Marine Corps to assist commanders/managers/supervisors in conducting evaluations which should preclude the "reinvention of the wheel" between organizations. Field Supply and Maintenance Analysis Office checklists, Supply and Maintenance Assistance Office checklists (internally generated by some commands), Inspector-General Marine Corps checklists, self-inspection program checklists, and Marine Corps Disbursing On-Site Examination Team (MCIOSET) checklists are examples of the many that already exist which identify the critical areas for consideration within functions. The Naval Audit Service audit programs assist management in conducting reviews of their functional areas to evaluate established controls and areas where controls may be weak or missing (SECNAVINST 7510.8A provides a list and instructions for obtaining them). Appendix G provides an example of an aid useful in the conduct of evaluations.

Implementation of a Management Control Program as a post-facto concern to organizational development is no easy task. The Marine Corps Manual clearly points out that internal controls have always been part of a commander's responsibilities. The General Accounting Office (GAO) has published Standards for Internal Control in the Federal Government which define the minimum acceptable quality of internal control systems and provide criteria against which systems will be evaluated. These standards also can be considered techniques useful in developing a control program and evaluating administrative controls as well as the management control system. Chapter IV provides some additional control techniques and criteria that both complement and supplement those provided by GAO.

The Comptroller of the 3D Force Service Support Group provides an appropriate commentary on the difficulties encountered in implementation of an effective program.

The greatest stumbling block to the effective implementation of such a program is parochial perceptions. i.e.: the Supply Officer who initiates acquisition beyond his financial ceiling simply because "they" need it; the Maintenance Officer who states he is only a "wrench-turner" and doesn't know the dollar value of materials consumed; or the Fiscal Officer who feels he is only an accountant and he told "them". Today's climate of concern regarding governmental waste, fraud and abuse demands that to be a leader one also must be an efficient resource manager. [Ref. 138]

## **VI. ANALYSIS, CONCLUSIONS, AND RECOMMENDATIONS**

### **A. INTRODUCTION**

The main purpose of this thesis has been to determine the answers to two questions: first, what is internal administrative control; and secondly, how does it apply to the Marine Corps? In this final chapter, the authors present the conclusions and recommendations derived from this research effort.

Section B of this chapter is a brief analysis of the data obtained from the Internal Administrative Control Questionnaire. Section C presents the conclusions derived from the research and analysis and offers recommendations relative to the implementation of an effective control program in the Marine Corps.

### **E. ANALYSIS OF THE QUESTIONNAIRE**

The questionnaire generally asked for an honest, personal interpretation of the phrase "internal administrative control" from personnel responsible for the implementation of the Marine Corps' Management Control Program at twenty-four major field activities. The questionnaire also asked each activity to provide, through answers to the questionnaire, evidence of how internal administrative control applied to them. The questionnaire was sent out subsequent to promulgation of Marine Corps Order (MCO) 7000.15 which directed the establishment of control systems and provided Headquarters' definitional interpretation. Response to the questionnaire was considered good, with fifteen of the twenty-four commands replying for a 63% response rate. A

review of the responses reflected that all but two respondents simply reiterated the definitions included by Headquarters, Marine Corps in its previously published Order. The information provided by those two respondents has been incorporated in Chapter IV of this thesis. Particularly helpful in this effort was the response of Major F.C.Fay, Comptroller of the 3D Force Service Support Group. In a separate letter to the authors, he provided unusual insight on the subject matter. His letter has been referenced in Chapter V. As a result of the "party line" response by the majority, the questionnaire did not provide the authors with any significant input as to the application of internal administrative control in the Marine Corps.

#### C. CONCLUSIONS AND RECOMMENDATIONS

A literary search provided relatively little information of use to the authors on the subject of internal administrative control. While most auditing literature mentioned the topic and its importance to the overall control program, discussions centered around accounting controls. Management control texts also reflect a void of discussion on the subject. As a result of significant research into the area of control, in general, the following conclusions relative to internal administrative control have been derived: first, administrative controls are those predetermined controls that give purpose, direction and meaning to the organization; second, administrative control applies to all levels of the organization, and management (at all levels) is responsible for the controls being in place and purposeful; and third, administrative controls are reflected in three dimensions in the organization; as organization controls

defining structure and delineation of authority and responsibility; as operating controls providing process and procedures; and, as information system controls which tailor the system to promote effective decision-making.

Administrative controls have applicability to any organization that requires purpose, direction and meaning, but they cannot exist in a static environment. As a result of environmental changes, personnel turnover, value changes, and goal redirection, administrative controls must be dynamic, thereby demanding constant review and update. The dynamics of administrative control preclude separation from management control, and, as a vital part of the organization, are intended to assist vice hamper management in the allocation of scarce resources.

The authors make the following recommendations for the implementation of effective administrative controls:

- (1) tours for commanding officers should be lengthened to permit a more intimate knowledge of the requirements for organizational control and to permit the adaptation of the management information system to meet their needs;

- (2) top-level management must take a more active role in establishing a positive control environment, necessitating evaluations of both themselves and their subordinates relative to this responsibility;

- (3) managers at all levels must have increased input into the design of management information systems to provide them with feedback on the adequacy of their controls;

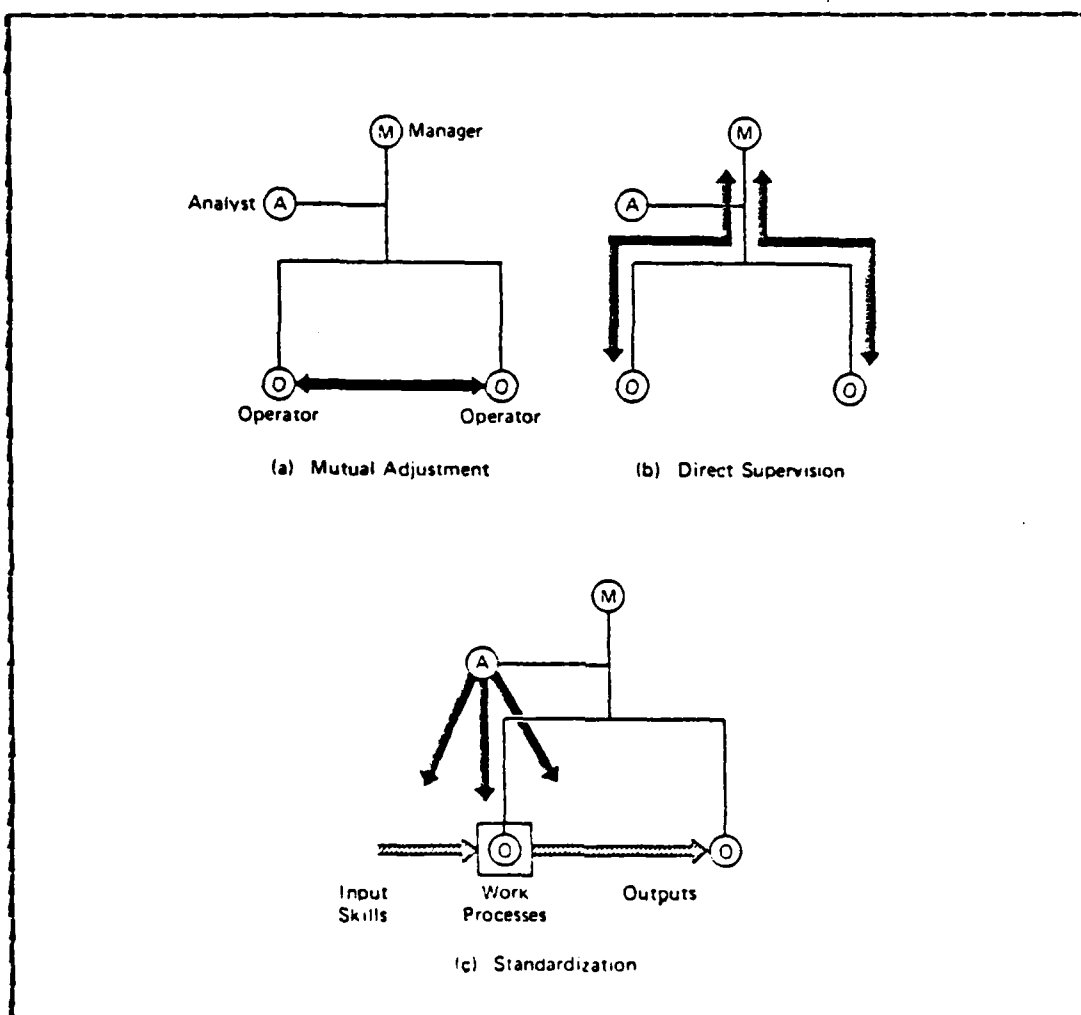
- (4) the management information system must have built-in flexibility to permit the tailoring of the system to meet changing management and environmental demands; and,

- (5) courses of instruction for managers at all levels.

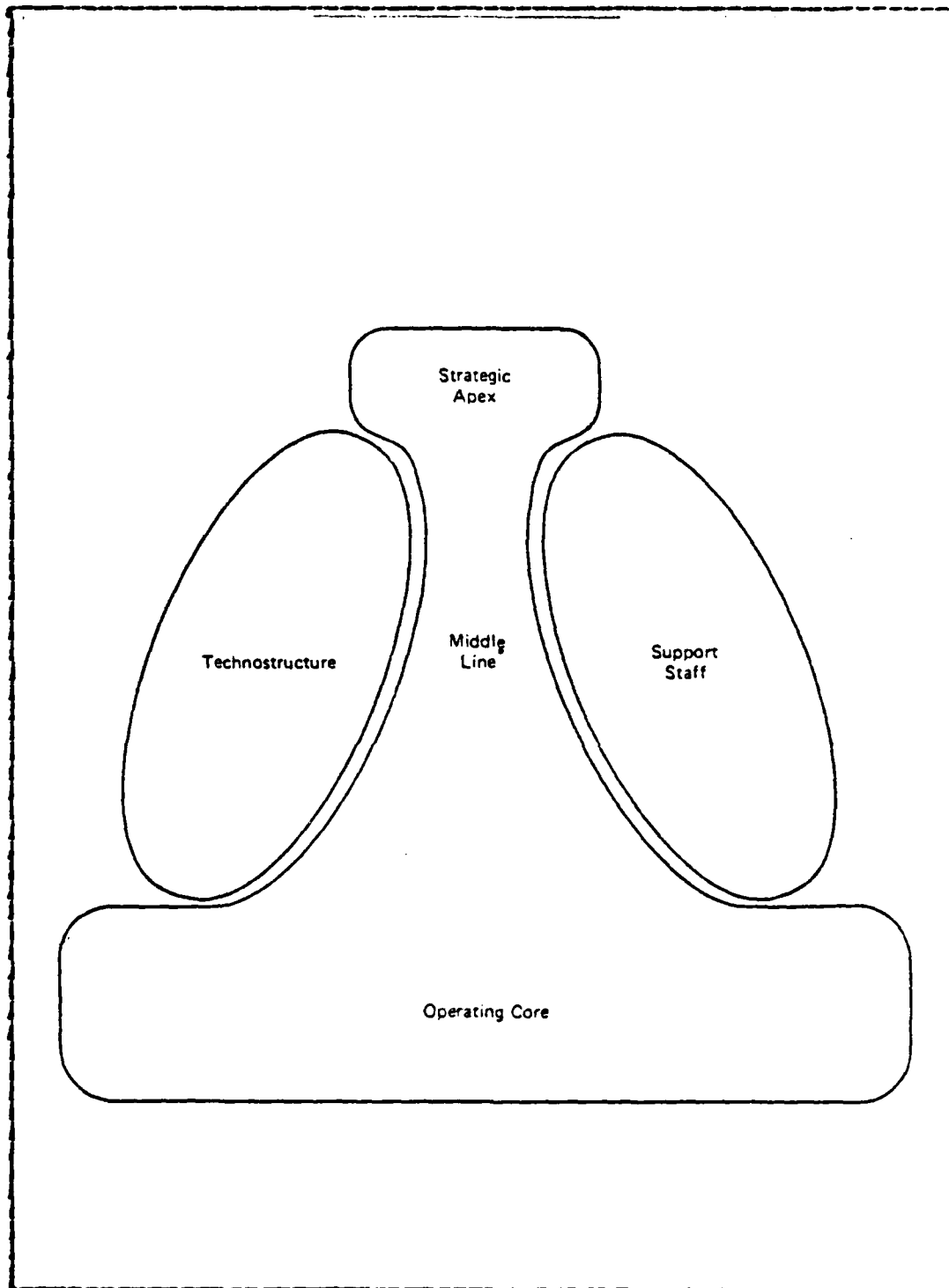
The requirements for commanders, managers and supervisors to establish control over their organization have existed over time in the Marine Corps, as illustrated by the

Marine Corps Manual and self-inspection programs. A conscious, concerted effort and increased understanding at every level of the organization is required to achieve a satisfactory management control program.

**APPENDIX A**  
**FIGURES**



**Figure A.1 The Five Coordinating Mechanisms.**



**Figure A.2 The Five Basic Parts of Organizations.**

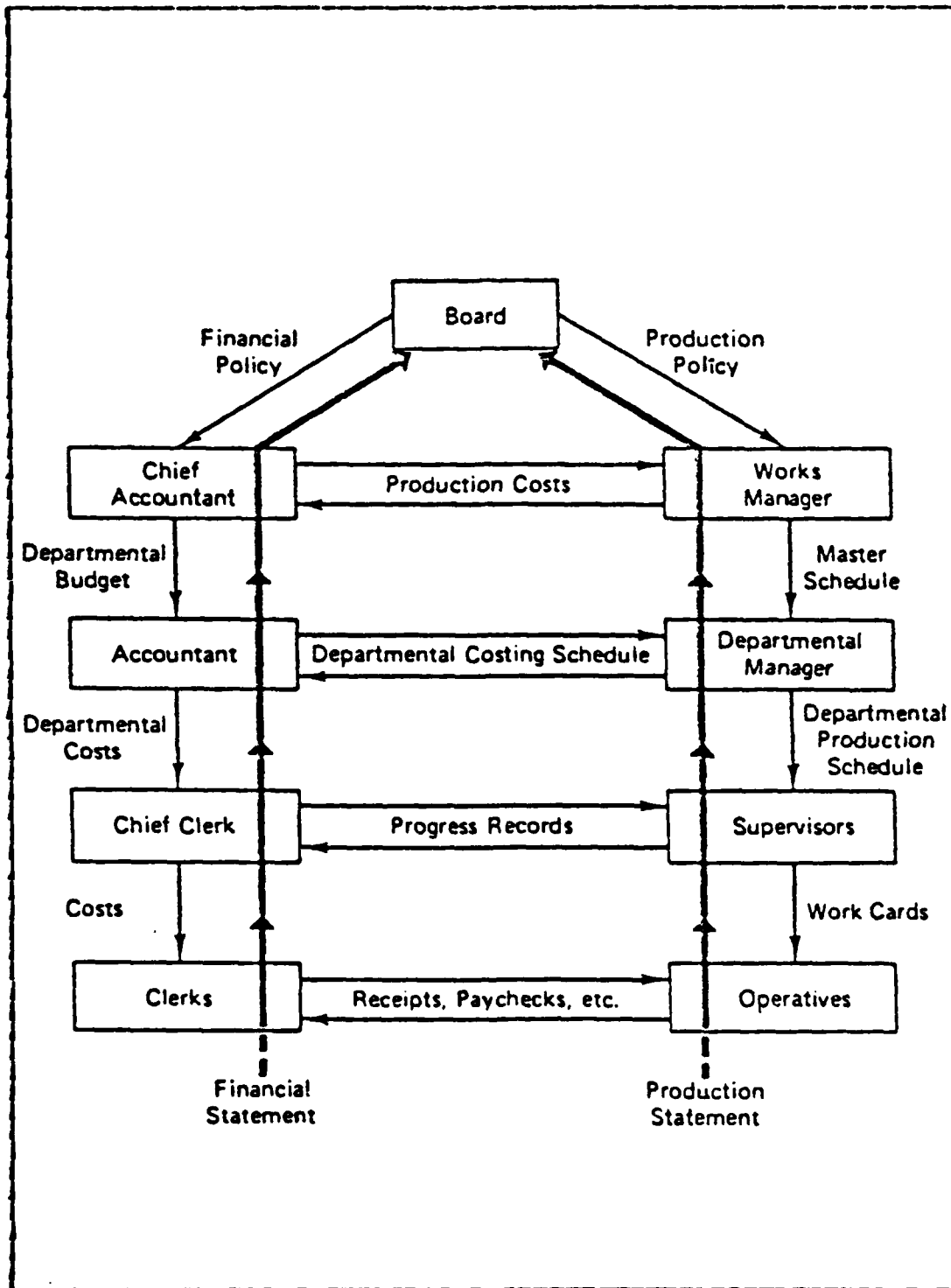


Figure A.3 An Illustration of Regulated Control Flows.

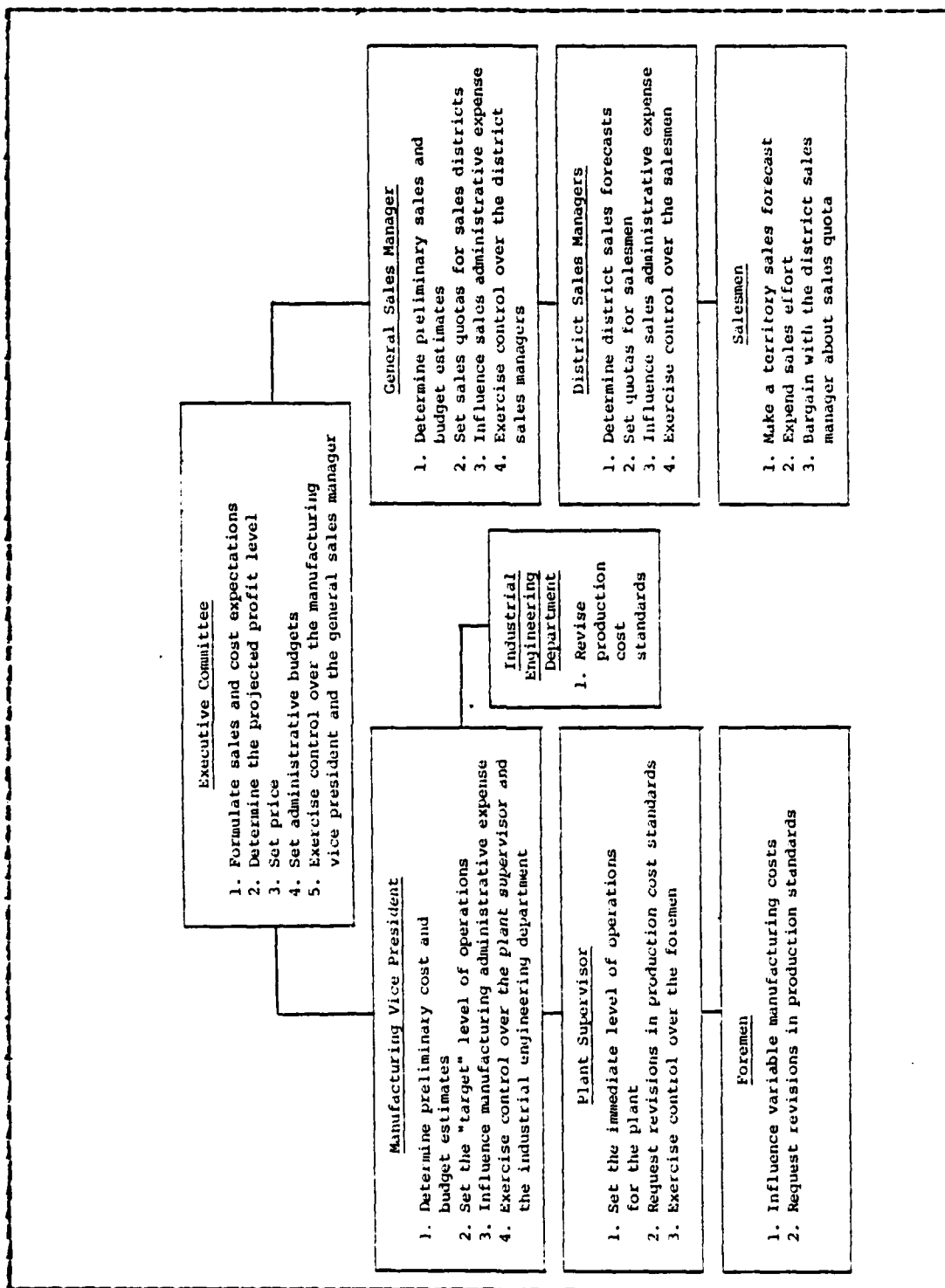


Figure A.4 A Regulated Decision System.

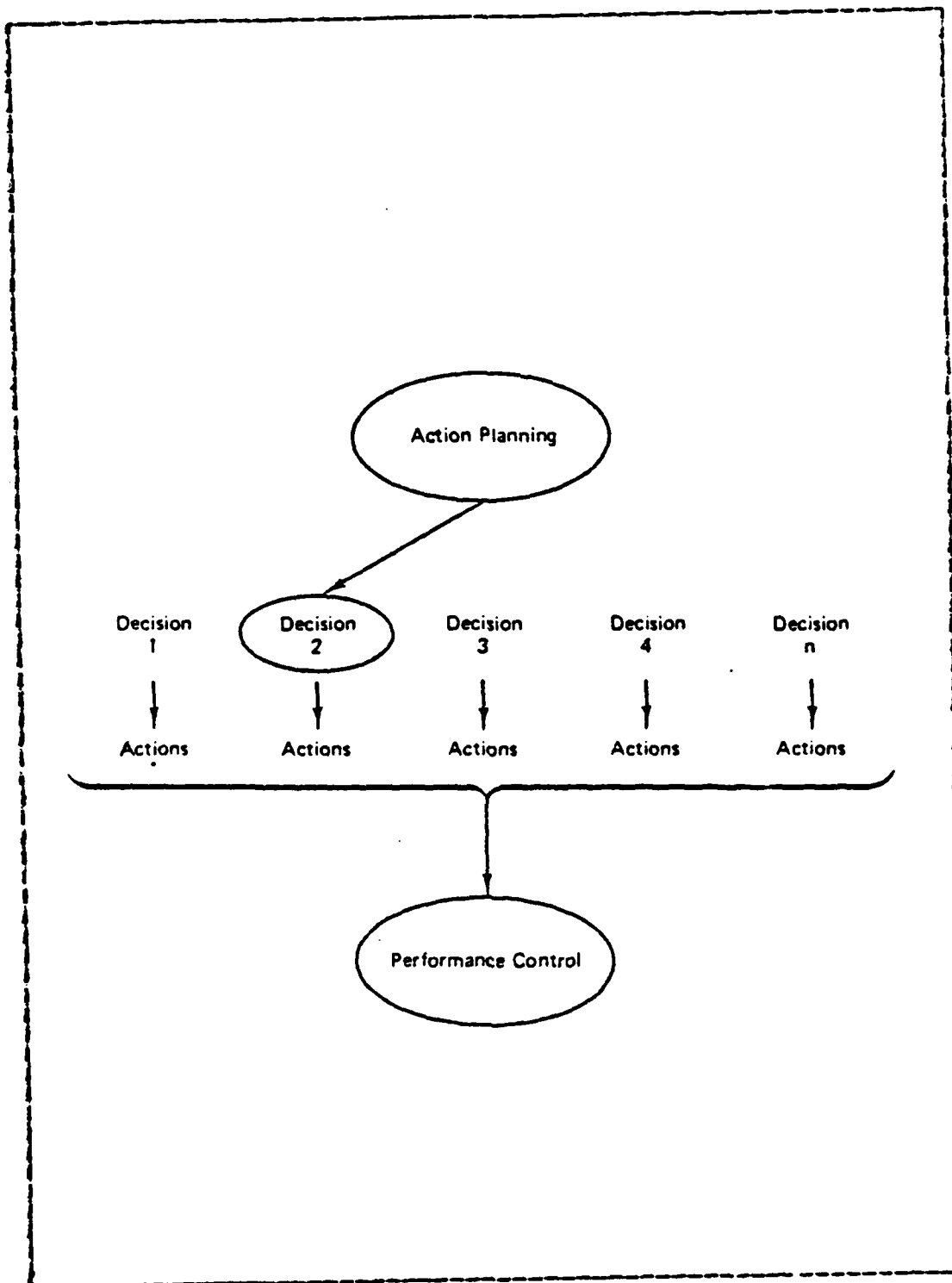


Figure A.5 The Relationship between Planning and Control.

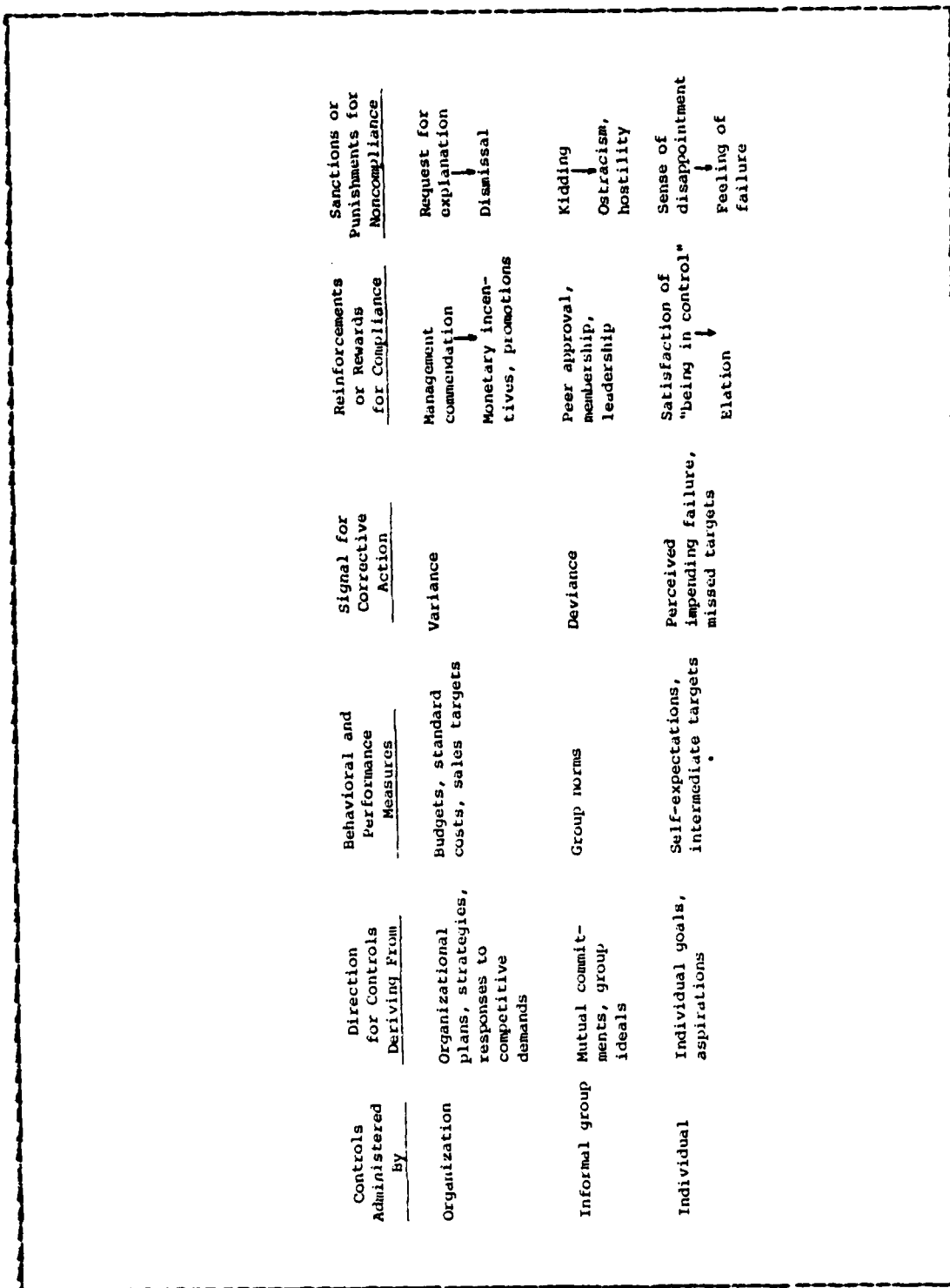


Figure A.6 Types of Control in Organizations.

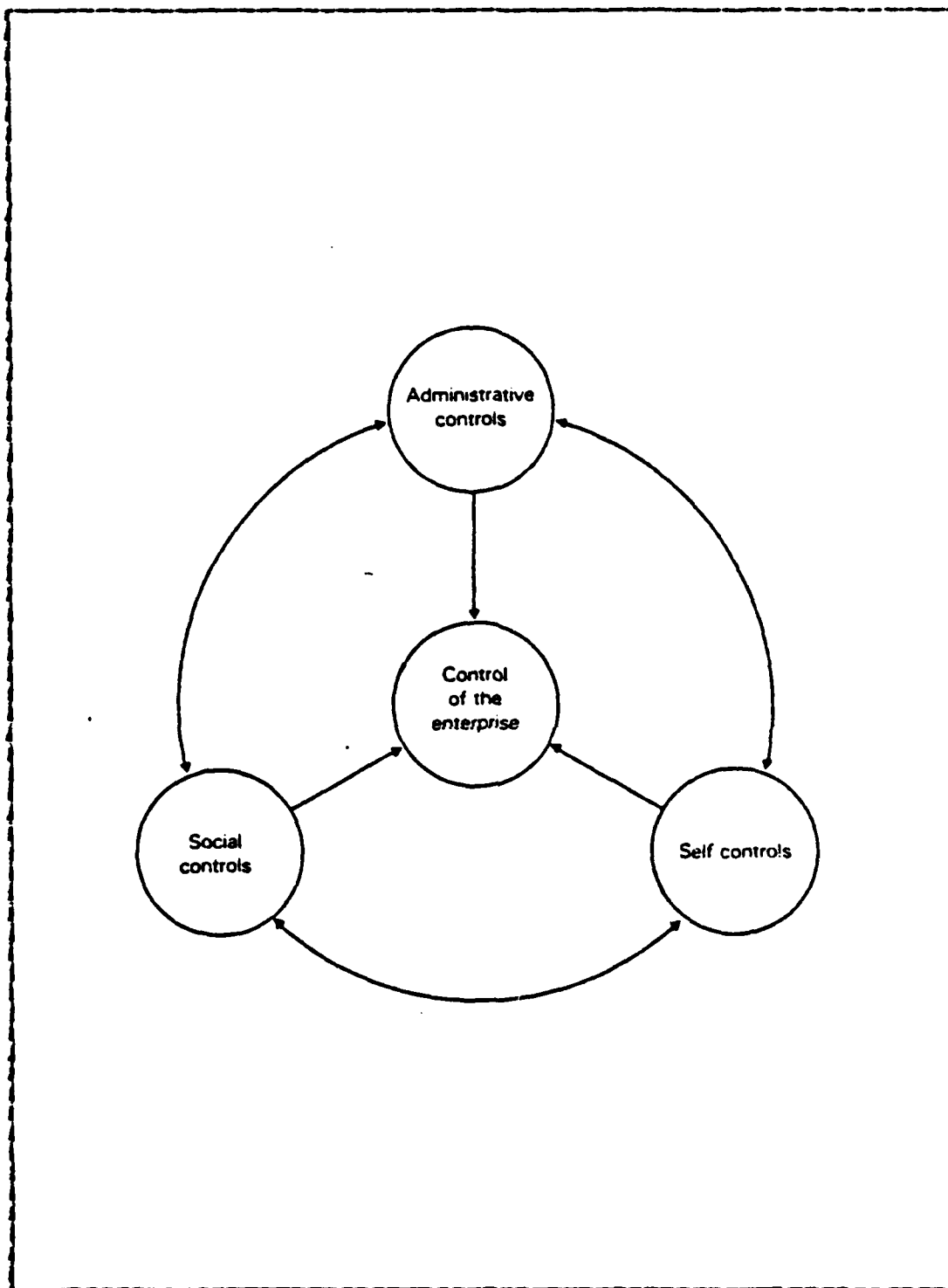


Figure A.7 Pattern of Organizational Control.

	<i>Administrative or Organizational</i>	<i>Social or Informal Group</i>	<i>Individual</i>
Learning or steering controls	Use of projections to determine potential budget variances	Advising a new employee of group norms	Setting short-term personal performance goals based on a desired professional position ten years hence
Pattern-recognizer or yes-no controls	Quarterly budget review to determine whether a project should continue	Not being invited to socialize after work with coworkers	Asking for a promotion after successfully negotiating a large contract
Compensatory or postaction controls	A bonus given to a manager for keeping within the previous year's budget	Kidding a colleague about having lunch with the boss too often	Leaving the organization after not being promoted

**Figure A.8 Examples of Control in Organizations.**

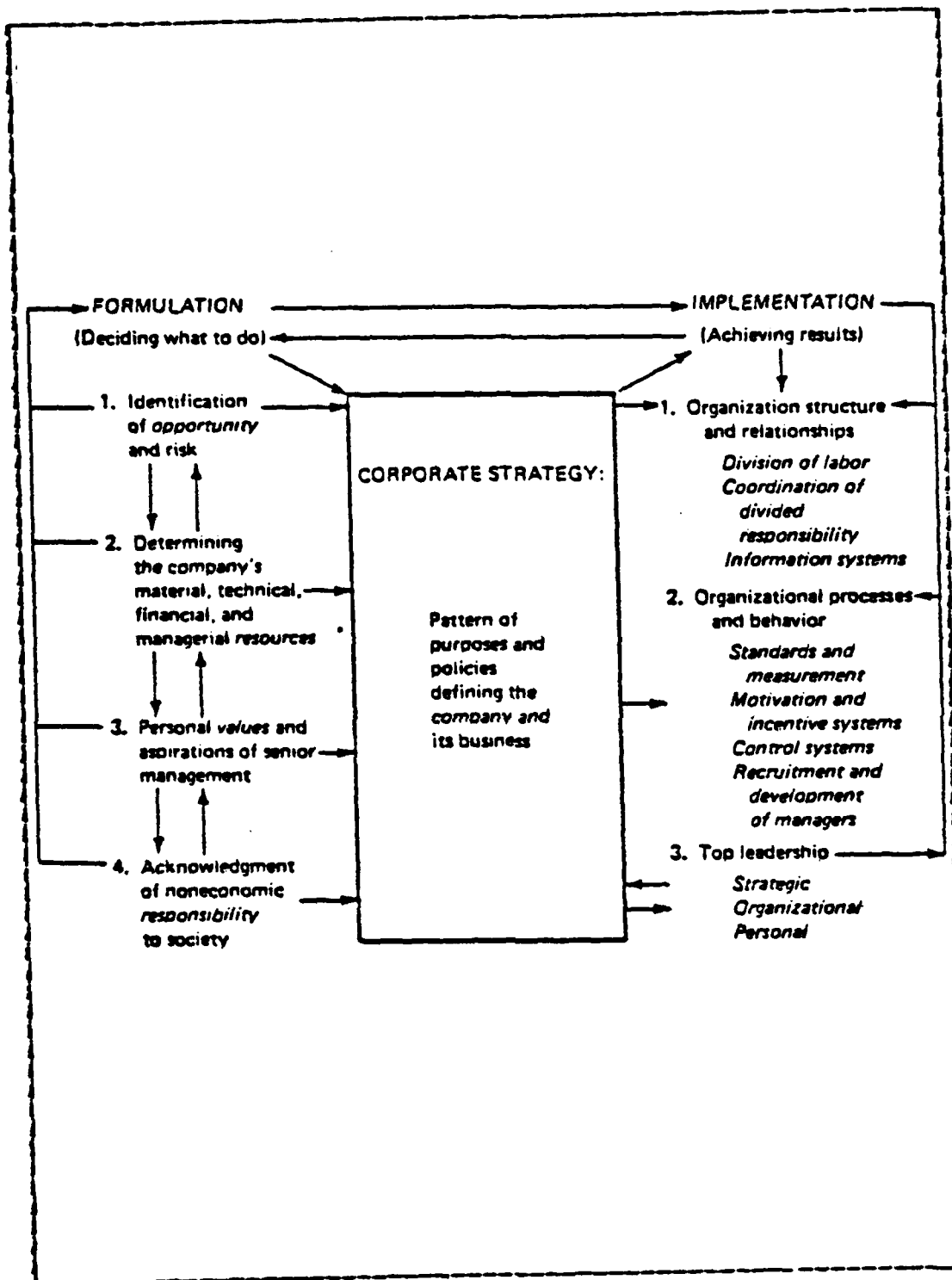


Figure A.9 Strategic Formulation and Implementation.

	<u>Strategic Planning</u>	<u>Tactical Planning</u>
Level of conduct	Highest levels of management	Lower management levels
Regularity	Continuous process; timing of decisions is irregular and as need arises	Periodic cycle on a fixed time schedule
Subjective values	Heavily weighted with subjectivity	Less subjective
Range of alternatives	Broader	Narrower
Uncertainty	More	Less
Nature of problems	Unstructured; one of a kind	More structured; repetitive
Information needs	Derived from and related to external environment; futuristic; imprecise; tailored to each problem	Heavy reliance on internal data, historical records, and accounting information
Time horizons	Usually long time spectrum, but sometimes shorter based on the subject	Shorter duration and more uniform
Completeness	Entire scope of the organization	Whole of a suborganizational unit executing parts of strategic plans
Reference	Source or origin for all planning	Executed within and in pursuit of strategic plans
Detail	Broad, few details	Detailed
Type of personnel mostly involved	Top management and staff; smaller numbers	Large numbers of managers and employees
Ease of evaluation	Results evident often only after several years; difficult to measure	Easier to measure effectiveness and efficiency; results are quickly evident and traceable to specific actions
Development of objectives, policies, strategies	New and generally debatable; minimal experience in judging correctness	Experience to guide development and evaluation
Point of view	Corporate	Functional

**Figure A.10 Strategic Planning versus Tactical Planning.**

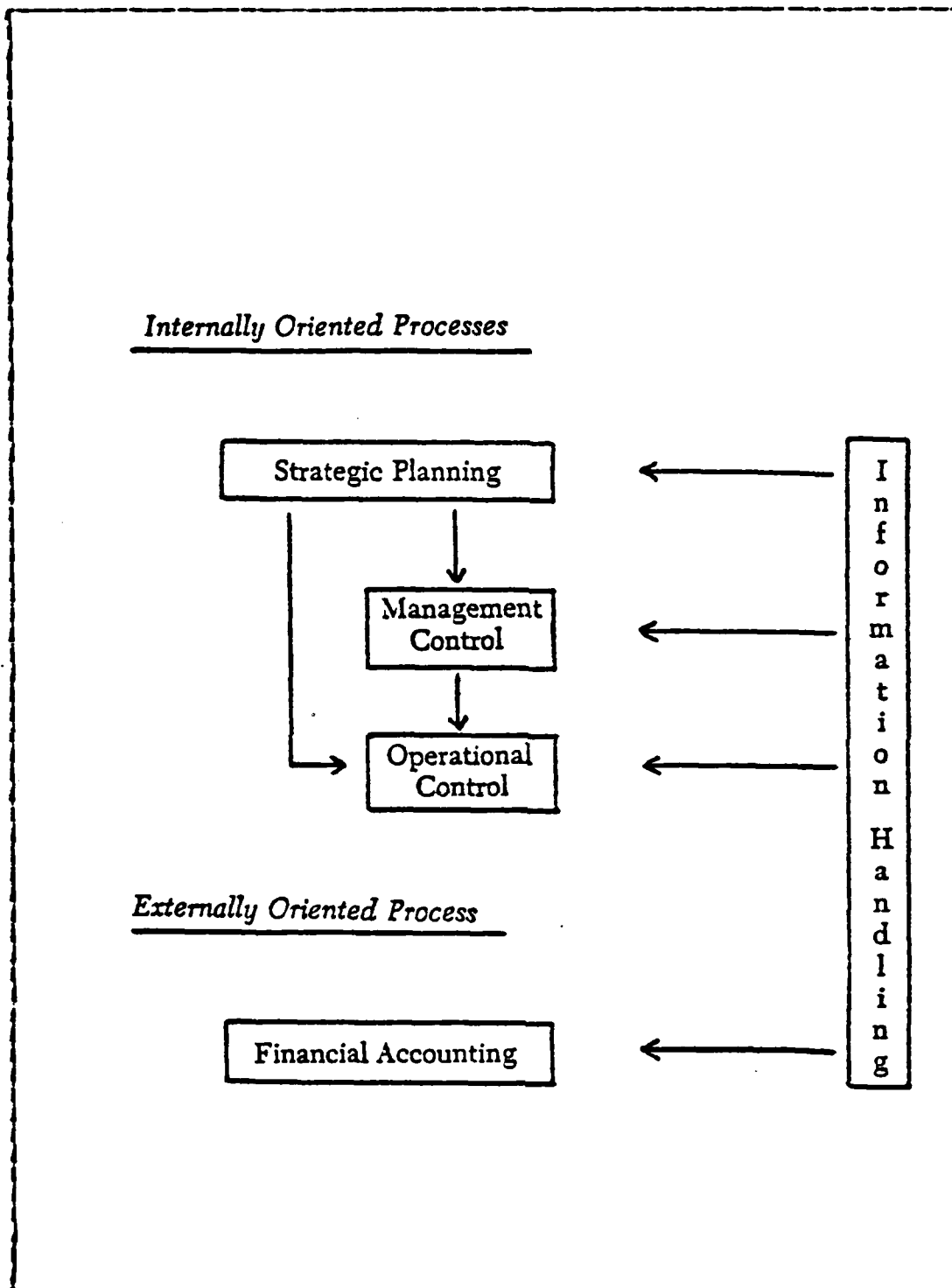


Figure A.11 Anthony's Planning and Control Processes.

	<u>Management Control</u>	<u>Operational Control</u>
Focus of activity	Whole operation	Single task or transaction
Judgment	Relatively much; subjective decisions	Relatively little; reliance on rules
Nature of structure	Psychological	Rational
Nature of information	Integrated; financial data throughout; approximations acceptable; future and historical	Tailor-made to the operation; often non-financial; precise often in real time
Persons primarily involved	Management	Supervisors (or none)
Mental activity	Administrative, persuasive	Follow directions (or none)
Source discipline	Social psychology	Economics; physical sciences
Time horizon	Weeks, months, years	Day to day
Type of costs	Discretionary	Engineered

**Figure A.12 Management Control versus Operational Control.**

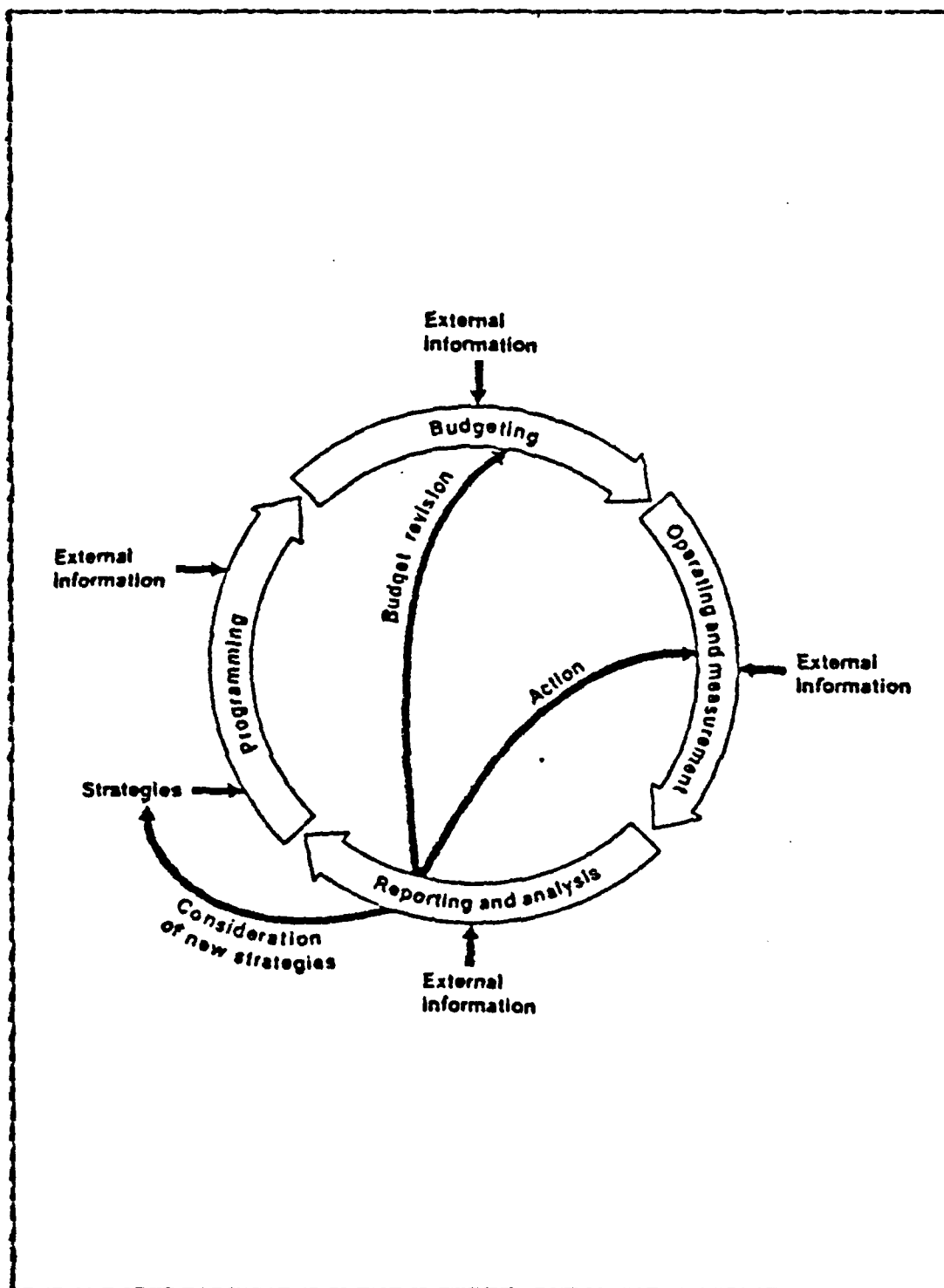


Figure A.13 Phases of Management Control.

## MANAGEMENT CONTROL

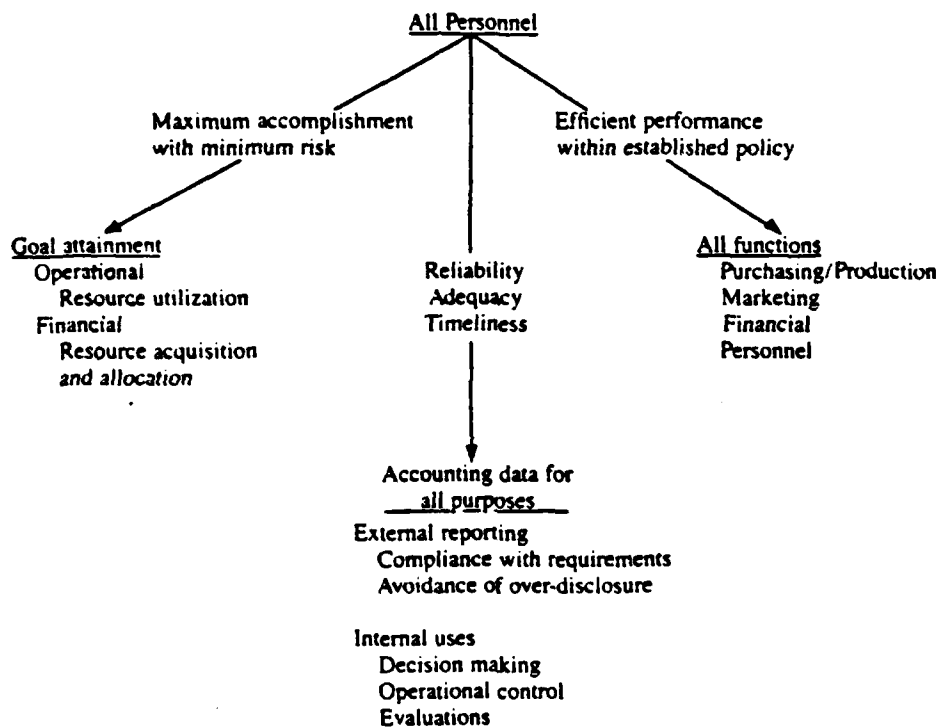


Figure A.14 Management Control Interrelationships.

## ACCOUNTING CONTROL

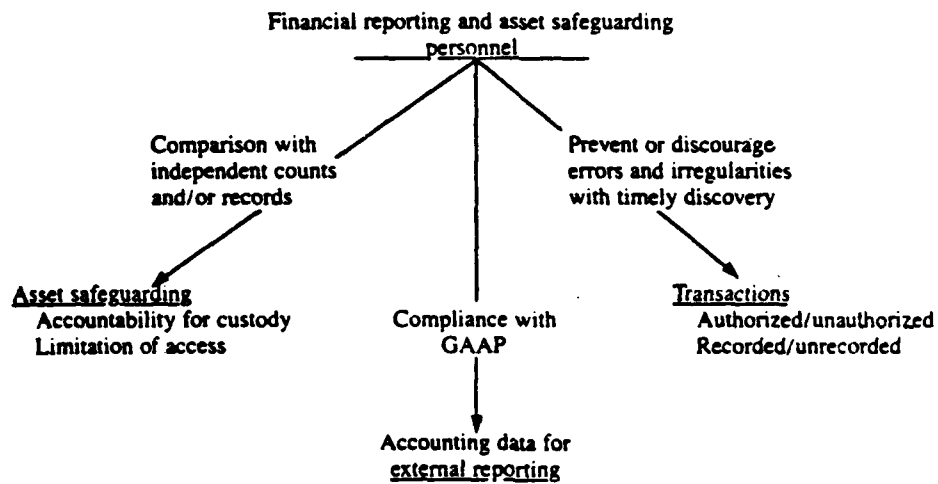


Figure A.15 The Interrelationships in Accounting Control.

	<u>Management Control</u>	<u>Accounting Control</u>
Scope	Broadly inclusive	Specifically limited
Emphasis	Attainment of corporate goals	Prevention, or discovery on a timely basis, of errors and irregularities in published financial statements
Purpose	Description of management opportunities	Description of audit responsibility
Intended application	General	Restricted; special purpose
Precision	Minimal	Significant
Source	Activities of corporate officers	Independent auditing needs and pronouncements
Goal	Operating and financial effectiveness for profit purposes	Prevention and detection of material errors and irregularities in published financial statements
Personnel to be controlled	All personnel in the organization	Personnel whose activities affect financial reporting and asset safeguarding
Functions	All (production, finance, personnel, marketing, accounting)	Financial reporting, asset safeguarding
Financial data	Internal and external reporting	External reporting only

Figure A.16 Management and Accounting Control Differences.

	<u>Administrative Control</u>	<u>Management Control</u>
Focus	On whole organization	On whole organization
Emphasis	Highly structured; prescribed procedures and policies	Attainment of corporate goals
Regularity	Continuous process but timing of decisions irregular as need arises	Continuous, rhythmic; follows a definite pattern and timetable
End result	Predetermined policies and procedures	Action within prescribed policies and procedures
Purpose of estimates	Lead to expected results	Lead to desired results
Persons primarily involved	Staff, line, and top management	Line and top management
Number of persons involved	Larger	Smaller
Mental activity	Administrative, conceptual, analytical	Persuasive, behavioral, evaluative
Source discipline	Interdisciplinary (Engineering, Planning, Production, Accounting, Systems Analysis)	Social Psychology
Appraisal of the job	Less difficult	More difficult, subjective
Measurement	Predetermined standards; compliance or noncompliance; economy and efficiency	Measured both in financial terms and nonquantifiable terms relative to overall performance
Data	Before the fact	Real time and retrospective
Judgment	Prior judgment based on expectations	Continuous judgment and evaluation of judgment
Control	Framework and parameters to control action and things	Controls things, money, and people
Degree of assurance	High degree due to historical input and comparative guidance	Not as high due to human variables and subjectivity

**Figure A. 17     Administrative versus Management Control.**

	<u>Administrative Control</u>	<u>Operational Control</u>
Focus	Both programmable and non-programmable; calculated and non-calculated	Calculated; programmable
Data	Before the fact; predetermined	Real time; reported as occurring
Emphasis	Compliance or noncompliance; economy and efficiency	Performance; production
Control	Framework and parameters to control action and things	Controls things
Degree of assurance	Not as high due to subjective interpretation by people	Highest degree; automated
Functions	All functions excluding human interactions	Individual transactions

**Figure A-18    Administrative versus Operational Control.**



APPENDIX B

INTERNAL ADMINISTRATIVE CONTROL QUESTIONNAIRE  
DEPARTMENT OF THE NAVY  
HEADQUARTERS UNITED STATES MARINE CORPS  
WASHINGTON, D.C. 20380

IN REPLY REFER TO  
FDA-33/nlf  
5200  
15 MAR 1984

From: Commandant of the Marine Corps  
To: Distribution List

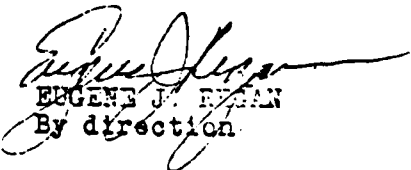
Subj: Internal (Management) Control System Questionnaire

Ref: (a) CMC ltr FDA-33/nlf 5200 of 29 Feb 1984

Encl: (1) Internal (Management) Control System Questionnaire  
Guidance  
(2) Internal (Management) Control System Questionnaire

1. At the request of this Headquarters, students at the Naval Postgraduate School, Monterey, California are conducting research related to the applicability, reliability, and effectiveness of current internal (management) control systems in the Marine Corps. The reference provided additional information in this regard. Research will primarily concentrate on administrative controls employed by command/management/supervisory personnel. A questionnaire has been developed to assist in this research and will serve as a primary source of information for this effort.

2. Enclosure (1) provides guidance and instruction for completion of the subject questionnaire, provided as enclosure (2). It is requested that enclosure (2) be completed in a thorough manner and returned to the Naval Postgraduate School (Attn: MarCorpRep Code 0309), Monterey, California 93943 no later than 15 April 1984.

  
EUGENE J. EGAN  
By direction

Distribution:  
CG FMFLANT Norfolk VA 23511  
CG FMFPAC Camp Smith HI 96861  
CG MCDEC Quantico VA 22134  
CG MCB Camp Pendleton CA 92055  
COMCABEAST Cherry Point NC 28533  
CG MCRD San Diego CA 92140  
CG Fourth MarDiv New Orleans LA 70146  
CG MCLB Albany GA 31704  
CG MCRD Parris Island SC 29905  
COMCABWEST El Toro CA 92709  
CG Fourth MAW New Orleans LA 70146  
CG MCB Camp Lejeune NC 28542  
CG MCAGCC Twentynine Palms CA 92278

FDA-33/nlf  
5200

Subj: Internal (Management) Control System Questionnaire

CG MCLB Barstow CA 92311  
CO HQBN HQMC Arlington, VA 22214  
CO MARFINCEN Kansas City, MO 64197  
CO MARBKS Washington, D.C. 20390  
Director, 1st MCD Garden City, LI, NY 11530  
Director, 4th MCD Philadelphia PA 19112  
Director, 6th MCD Atlanta GA 30303  
Director, 8th MCD New Orleans LA 70142  
Director, 9th MCD Shawnee Mission KS 66204  
Director, 12th MCD Treasure Island CA 85034  
Director, MCRSC Overland Park, KS 66211

Copy to:  
MarCorRep, NPGS, Monterey, CA 93943

## QUESTIONNAIRE SUMMARY

### PURPOSE:

To determine an operational definition of internal administrative control based on survey responses from Marine Corps Commanders with secondary emphasis on identification of resources and skills essential to management control system implementation and maintenance, development of administrative control techniques, and improvements to clarify Marine Corps guidance on internal management control systems.

### BACKGROUND:

In October 1981, the Office of Management and Budget (OMB) released Circular A-123 which directed Federal Agencies to maintain effective systems of internal control. In 1982, Congress enacted the Federal Managers' Financial Integrity Act (FMFIA) which requires in part that each executive agency establish and conduct evaluations of their systems of internal accounting and administrative controls. In response to this requirement, Marine Corps Order (MCO) 7000.15 was issued promulgating guidance on the establishment and maintenance of internal control systems.

### OBJECTIVE:

Based on analysis and comparison of examples and survey responses, the objective of this questionnaire is to:

- (1) determine an operational definition of administrative control to increase universal understanding of the concept.
- (2) assist in the development and implementation of administrative control systems within the Marine Corps.
- (3) develop improvements to and clarifications of current Marine Corps guidance relative to internal management control systems.

Your cooperation in completing this questionnaire will facilitate Marine Corps implementation of internal administrative control requirements. Your frank and candid comments are encouraged. Information contained herein will be held in strictest confidence. Identifying information is requested only to resolve any future questions that may arise.

Questions or clarification on any matters concerning this survey should be direct to:

MAJ H. G. RUDGE.....Autovon	878-2557/3039/2401
LCRD C. F. ILLIG.....Autovon	878-2557/3039/2401

INTERNAL ADMINISTRATIVE CONTROL QUESTIONNAIRE

Name of Respondent \_\_\_\_\_

Grade/Rank \_\_\_\_\_

MOS(s) \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Organization \_\_\_\_\_

1. Management controls encompass both accounting control as well as administrative control. In operational terms, define administrative control relative to your organization, or as interpreted by your command.

2. For the purpose of conducting vulnerability assessments, the Department of the Navy (DON) has been segmented into twenty major programs/functions. In the following list, check the programs/functions for which your organization has developed administrative controls.

- |  |   |
|--|---|
| <input type="checkbox"/> Administrative Support    | <input type="checkbox"/> Medical  |
| <input type="checkbox"/> Audit                     | <input type="checkbox"/> Military Assistance<br>(Foreign Military Sales<br>International Logistics) |
| <input type="checkbox"/> Automatic Data Processing | <input type="checkbox"/> MWR Activities   |
| <input type="checkbox"/> Communications            | <input type="checkbox"/> Personnel  |
| <input type="checkbox"/> Education and Training    | <input type="checkbox"/> Property Management<br>(includes Phys Inventory)                           |
| <input type="checkbox"/> Facilities/Base Maint     | <input type="checkbox"/> Procurement  |
| <input type="checkbox"/> Financial                 | <input type="checkbox"/> Research   |
| <input type="checkbox"/> Intelligence/Security     | <input type="checkbox"/> Supply   |
| <input type="checkbox"/> Legal                     | <input type="checkbox"/> Transportation   |
| <input type="checkbox"/> Maint, Repair, Overhaul   |   |
| <input type="checkbox"/> Manufacture               |   |

3. Are these administrative controls formalized in writing?

(Yes/No)

4. What programs/functions are peculiar to your organization and cannot be classified in the segments listed above?

5. Has your organization also developed administrative controls for these command-specific programs/functions?

(Yes/No)

6. What is the general command/management attitude toward administrative controls?

7. It is neither necessary nor cost-beneficial to have complete control over every situation. There is a point at which the level of control should be established. In general, what is the lowest entity/level of administrative control that has been established in your organization?

8. MCO 7000.15 provides guidance for vulnerability assessments. How has your organization determined those programs/functions that are most vulnerable to waste, fraud, and abuse due to deficiencies in administrative control?

9. What specific techniques or methodologies were used for those vulnerability assessments? What problems have you encountered in the conduct of those assessments?

10. How has your organization conducted risk analysis in the area of administrative control?

11. What specific techniques or methodologies were used for risk analysis? What problems have you encountered in the conduct of this analysis?

12. In general, what indicators have been established to provide reasonable assurance that your organization's administrative controls are reliable and effective?

13. Who has your organization designated to design the management control system? Has this individual utilized functional area specialists to assist in system design for a particular area?

14. What was the rationale behind the assignment of the management control system designer?

15. Who has been designated to implement/maintain/coordinate your organization's management control system?

16. What was the rationale behind this assignment?

17. What changes/improvements to the internal management control system (with emphasis on administrative control) could your organization recommend? Please include justification for your proposals.

18. Has your organization established administrative procedures or mechanisms to enforce the intended functioning of management controls?

(Yes/No)

If yes, described these procedures/mechanisms.

19. It is requested that you provide copies of any locally generated forms which have assisted you in the implementation and maintenance of your internal management control system.

20. Any questions concerning this questionnaire should be directed to:

MAJ H. G. RUDGE.....Autovon: 878-2557/3039/2401  
LCDR C. F. ILLIG.....Autovon: 878-2557/3039/2401

APPENDIX C  
GENERAL CONTROL ENVIRONMENT ANALYSIS

Organizational Segment \_\_\_\_\_

This form should be filled out for each operational department and directorate. It may be completed for the component as a whole or individually for each program or administrative function. The determining factors should be size, nature and functions conducted within the component.

This form, used as an analytic checksheet, can determine whether the characteristics of a strong, general control environment exists by: (a) reviewing your documented policies and procedures, (b) talking with management and other personnel, (c) observing practices, and (d) drawing upon your familiarity with the operation.

All questions require comments. Deficiencies currently identified which are being corrected should be mentioned. Any outstanding audit findings which have not been resolved should be used and weighed when answering these questions.

This form should be completed with the knowledge that currently exists in your operations. No new studies or reviews are required or intended. This form is designed to be filled out after meeting with the key personnel in your organization.

Use the following rating scale to evaluate each area:

- 5 - At the ideal level (no negative impact)
- 4 - Some improvement may be possible
- 3 - Good with improvements being planned (moderate negative impact)
- 2 - Fair, needs major studies and changes to improve
- 1 - Needs immediate management attention (heavy negative impact)

1. Management Attitude. Are management policies and decisions implemented as directed? Does management follow its own policies? Do managers and supervisors know their responsibilities in regard to internal control? Are deviations from policy and guidelines dealt with as unacceptable?

Rating \_\_\_\_\_

Comments:

2. Organizational Structure. Is the organizational unit segmented satisfactorily? Do problems exist on functions which are inter-departmental? Is the main responsibility for performing a function controlled outside of the NAVFINCEN?

Rating \_\_\_\_\_

Comments:

3. Personnel. Are the personnel competent and do they have the integrity required by their jobs? Have they been adequately trained? Is there a high turnover rate? Is the length of time to train journeymen a problem? Do employees have career paths?

Rating \_\_\_\_\_

Comments:

4. Delegation and Communication of Authority and Responsibility. Has appropriate delegation or limitation of authority been made that insures that responsibilities are effectively discharged? Do effective communication channels exist? Does communication flow both up and down these channels?

Rating \_\_\_\_\_

Comments:

5. Policies and Procedures. Does the documentation of policies and procedures for internal controls exist? (These include written policy standard operating procedures, pay related manuals, flow charts, position descriptions, functional statements, design manuals, decision tables, software, memoranda, completed questionnaires and any other related written material used to describe the internal control methods.) Are these documents disseminated to those individuals that require access to them? Does this documentation effectively describe how the organization is intended to perform in almost all situations?

Rating \_\_\_\_\_

Comments:

6. Budgeting and Reporting Practives. Are organizational goals communicated and specified to supervisors and employees? Are the goals monitored to the extent of their accomplishment? Are all levels of management involved in the budget cycle?

Rating \_\_\_\_\_

Comments:

7. Organizational Checks and Balances. Is there an appropriate level of financial and other management controls? Does management feel satisfied that internal review and quality assurance are at an acceptable level? Are control objectives periodically reviewed?

Rating \_\_\_\_\_

Comments:

8. ADP Consideration. Is there an awareness of the strengths and exposures inherent in a system that uses ADP? Are ADP decisions that affect operational processing made by management or left in hands of ADP personnel?

Rating \_\_\_\_\_

Comments:

9. Risk Assessment. List the ten risks which concern management in the segments under your administration. Also note the current management control objective to combat that risk and the control technique that is being used to prevent the risk from occurring. (You must list at least ten.)

Risk

Control Objective

Control Technique

Rating \_\_\_\_\_

Manager's Name \_\_\_\_\_

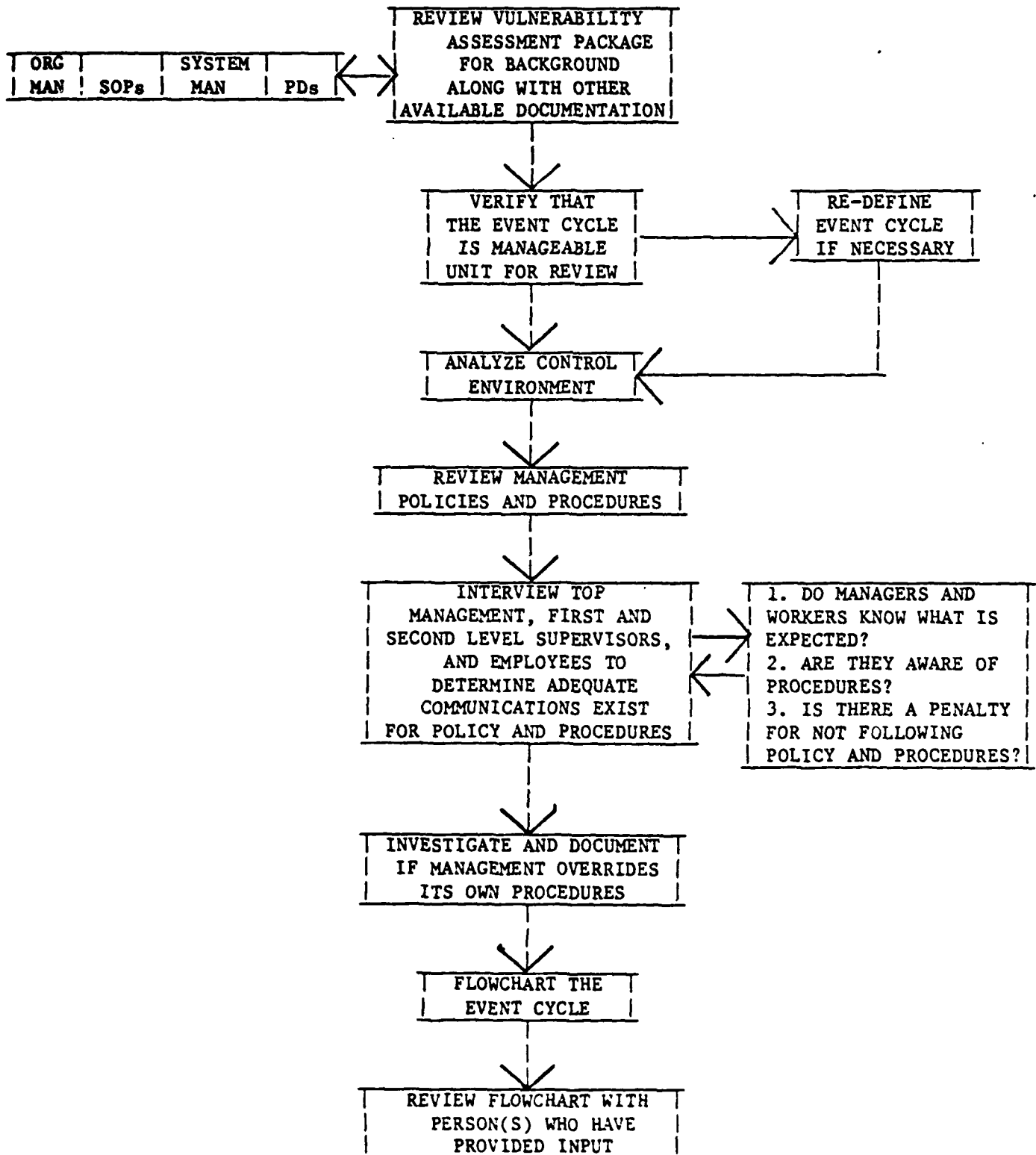
Date \_\_\_\_\_

Internal Control Officer's Name \_\_\_\_\_

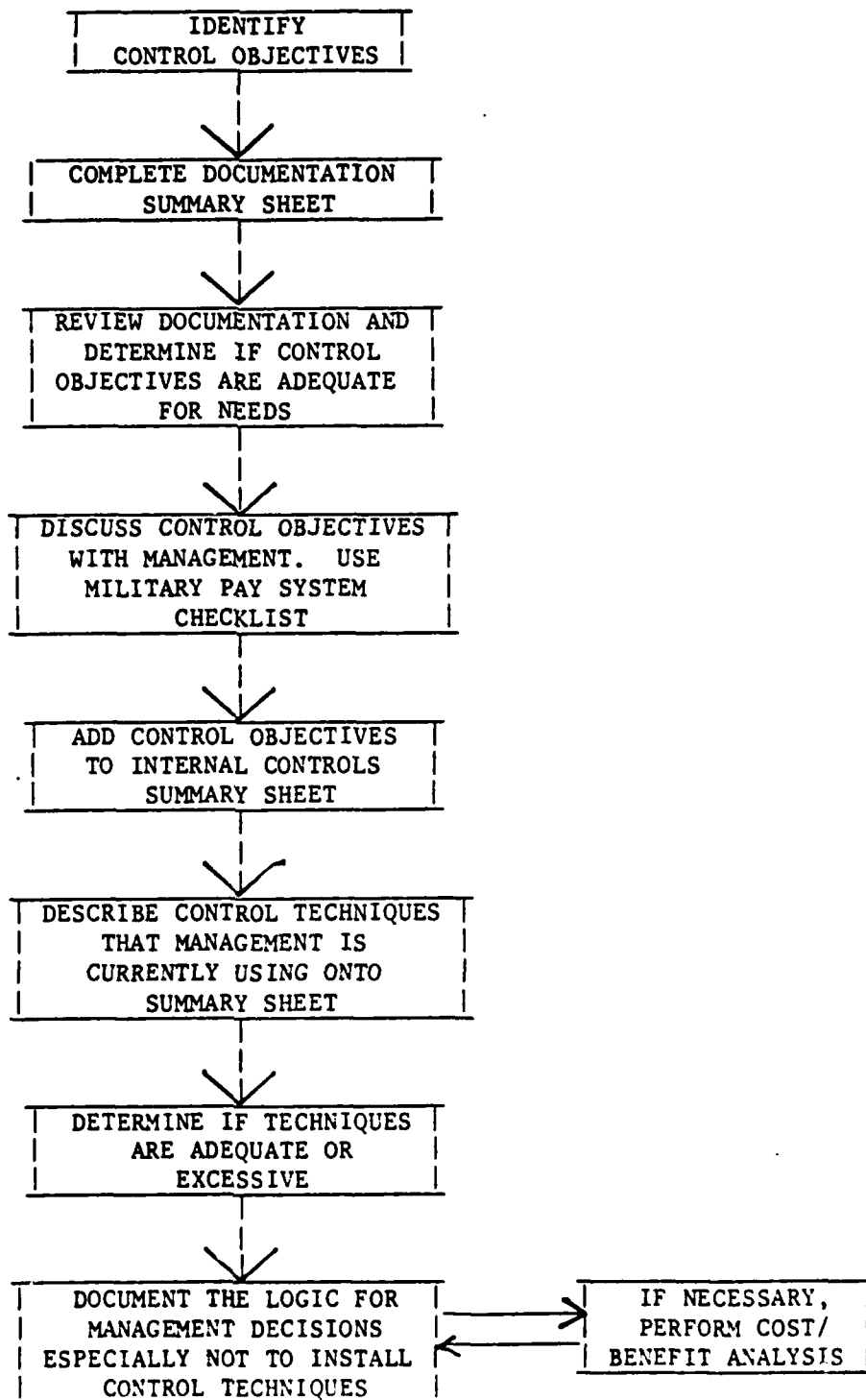
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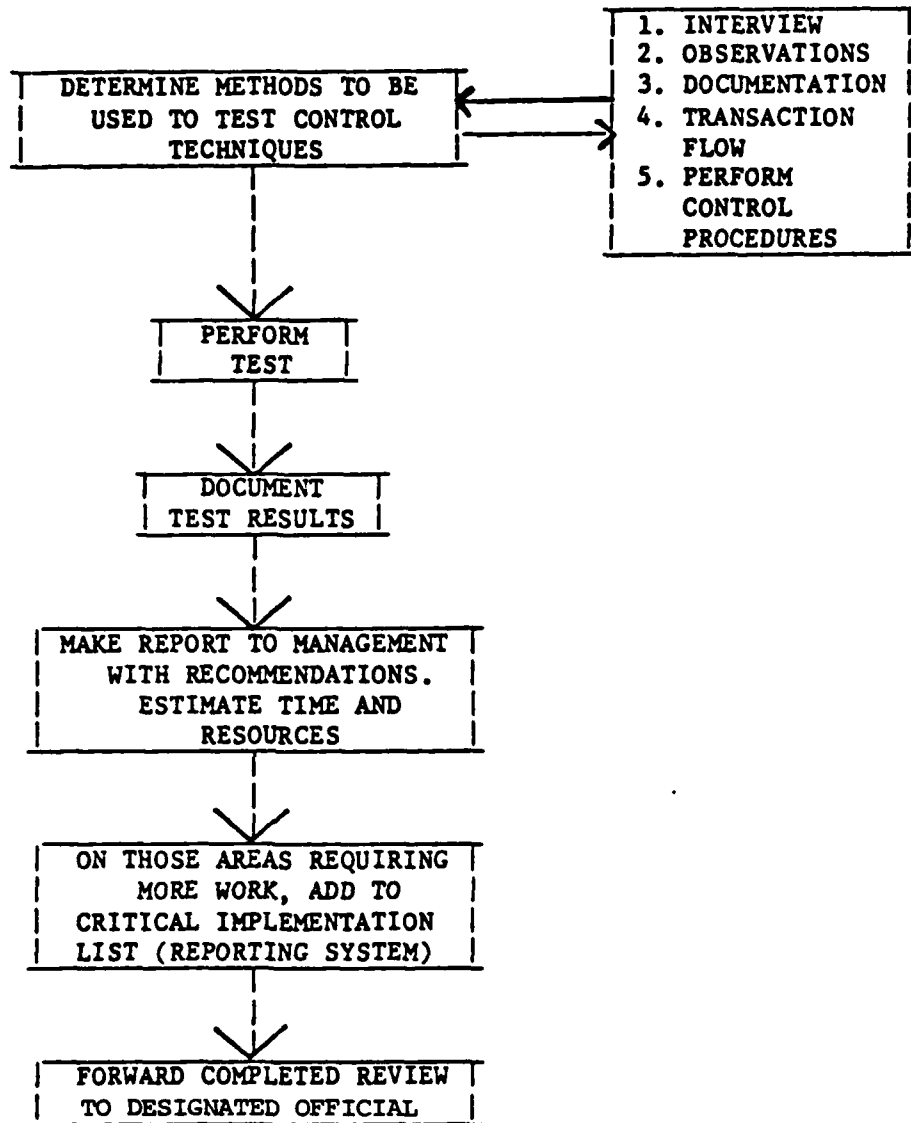
APPENDIX D  
ADMINISTRATIVE CONTROL FLOWCHART  
STEPS TO FOLLOW  
DURING AN INTERNAL CONTROLS REVIEW



STEPS TO FOLLOW  
DURING AN INTERNAL CONTROLS REVIEW



STEPS TO FOLLOW  
DURING AN INTERNAL CONTROLS REVIEW



APPENDIX E  
ADMINISTRATIVE CONTROLS FOR  
PRODUCTIVE ASSETS

ORGANIZATION CONTROLS :

- (1) Organization Structure
  - (a) Functions and activities relating to the management of productive assets should be defined and established in accordance with stated management goals and objectives.
  - (b) There should be clear assignment of responsibility and commensurate delegation of authority for these functions and activities.
  - (c) There should be adequate and competent staffing and supervision with appropriate coordination and communication with other functions.
- (2) Productive Asset Control Responsibilities
  - (a) Capital asset planning.
  - (b) Capital project management.
  - (c) Operation of capital assets.

OPERATING CONTROLS :

- (1) Policies and Procedures for Productive Assets
  - (a) Acquisition and disposal of productive assets.
  - (b) Capitalization of costs.
  - (c) Leasing versus purchasing of assets.
  - (d) Custody and use of capital assets.
  - (e) Evaluating potential and actual results of acquiring capital assets.
- (2) Long and Short Range Capital Asset Planning
  - (a) Coordination with other functions.
  - (b) Appropriate consideration of the length of time required to plan, acquire and put into operation the related productive assets.
  - (c) Analysis of the technical and financial feasibility of proposed projects.
  - (d) Establishment of priorities for selection and funding of competing projects.
  - (e) Development of a long range capital expenditure program and an annual expenditure budget.

- (3) Proposal, Evaluation, and Approval of Projects
  - (a) Description of the short and long range operating needs to be met by the acquisition of facilities or equipment.
  - (b) Description of the physical and technical specifications of facilities or equipment to be acquired.
  - (c) Estimate of the operating benefits, costs, and product quality expected from the program or project.
  - (d) Estimate of the time periods involved, including dates of physical completion or acquisition, and the timing of expected cash investments and returns.
  - (e) Estimate of total costs incurred, including costs of project development, relocation, start-up, and proceeds from disposition of present assets.
  - (f) Description of proposed depreciation or amortization methods, rates, and amounts.
  - (g) Estimated initial expenditure requirements, including items to be capitalized and expensed.
  - (h) Expected project revenues, expenses, and net cash flows by year.
  - (i) Financial tests of investment worth.
  - (j) Whether to make, buy, or lease capital assets.
  - (k) Alternative methods of financing.
  - (l) Ranking of alternative expenditure opportunities according to criteria set by management.
- (4) Acquisition of Capital Assets
  - (a) Requesting bids for asset acquisitions.
  - (b) Contracting for acquisition, delivery, and installation of assets.
  - (c) Procurement of related materials and supplies.
  - (d) Disposition of assets by sale, abandonment, or retirement as a result of acquisitions.
- (5) Monitoring of Capital Asset Acquisitions
  - (a) Clear designation of project management responsibility.
  - (b) A detailed project plan and schedule using, if appropriate, the Critical Path Method (CPM) or a similar network planning and control technique.

- (c) A plan for the commitment of resources.
- (d) Detail cost estimates by task.
- (e) Detail cost accumulation by task and by type of expense.
- (f) Project status reporting on schedule, cost, and completion performance with variances by cause and responsibility.
- (g) Periodic and final technical reviews.
- (h) Defined acceptance criteria.
- (i) Procedures for accumulating and transferring costs to appropriate capital and expense accounts.
- (j) Post-completion reviews as to costs and benefits compared to plans.
- (6) Custody and Use of Productive Assets
  - (a) Separate identification and individual accountability for each asset.
  - (b) Periodic determination of the existence of the assets.
  - (c) Authorized access to and use of assets.
  - (d) Adequate insurance coverage and protection against physical loss.
  - (e) Authority to sell or otherwise dispose of capital assets.
- (7) Maintenance of Capital Assets
  - (a) Appropriate preventative and corrective maintenance.
  - (b) Formal scheduling, budgeting, and accounting for maintenance activities.
  - (c) Periodic analysis of costs of maintenance to consider replacement of productive assets.

INFORMATION SYSTEM CONTROLS :

- (1) Long and Short Range Capital Plans and Budgets
  - (a) Long range planning information.
    - (1) Forecasts pertaining to assets
    - (2) Facility requirements and productive asset additions and replacements to meet these forecasts
  - (b) Short range capital budgets.
    - (1) Capital budget for the current year
    - (2) Periodic reports comparing budgeted and actual expenditures to date

- (2) Capital Project Control Information
  - (a) Project progress and status reports:
    - (1) Project plan, resource requirements, and schedule
    - (2) Comparison of schedule with actual performance by task
    - (3) Comparison of budgeted with actual expenditures to date plus estimate to complete
    - (4) Projected physical work and cost to complete.
  - (b) Approved project proposals.
  - (c) Approved feasibility studies.
  - (d) Post-completion reports, by task and project, analyzing any major variances from budgets or estimates.
- (3) Other Operating Information
  - (a) Maintenance reports:
    - (1) Preventative/corrective maintenance schedule and performance
    - (2) Maintenance budget and actual-to-date
  - (b) Productive asset reports:
    - (1) Current inventory of productive assets
    - (2) Additions, sales, or retirements by class of assets and time period
  - (c) Statistical data and reports:
    - (1) Leased facilities and equipment
    - (2) Utilization of plant capacity and individual facilities
    - (3) Idle plant and equipment
    - (4) Equipment breakdown analysis
    - (5) Machine repair histories
    - (6) Maintenance work order backlogs
    - (7) Maintenance cost trends
    - (8) Insurance coverage
    - (9) Property tax assessments

## APPENDIX F

### EXAMPLE OF FUNCTIONAL ADMINISTRATIVE CONTROLS

#### RISK EXAMPLES

Major Program/Function: Administrative Support

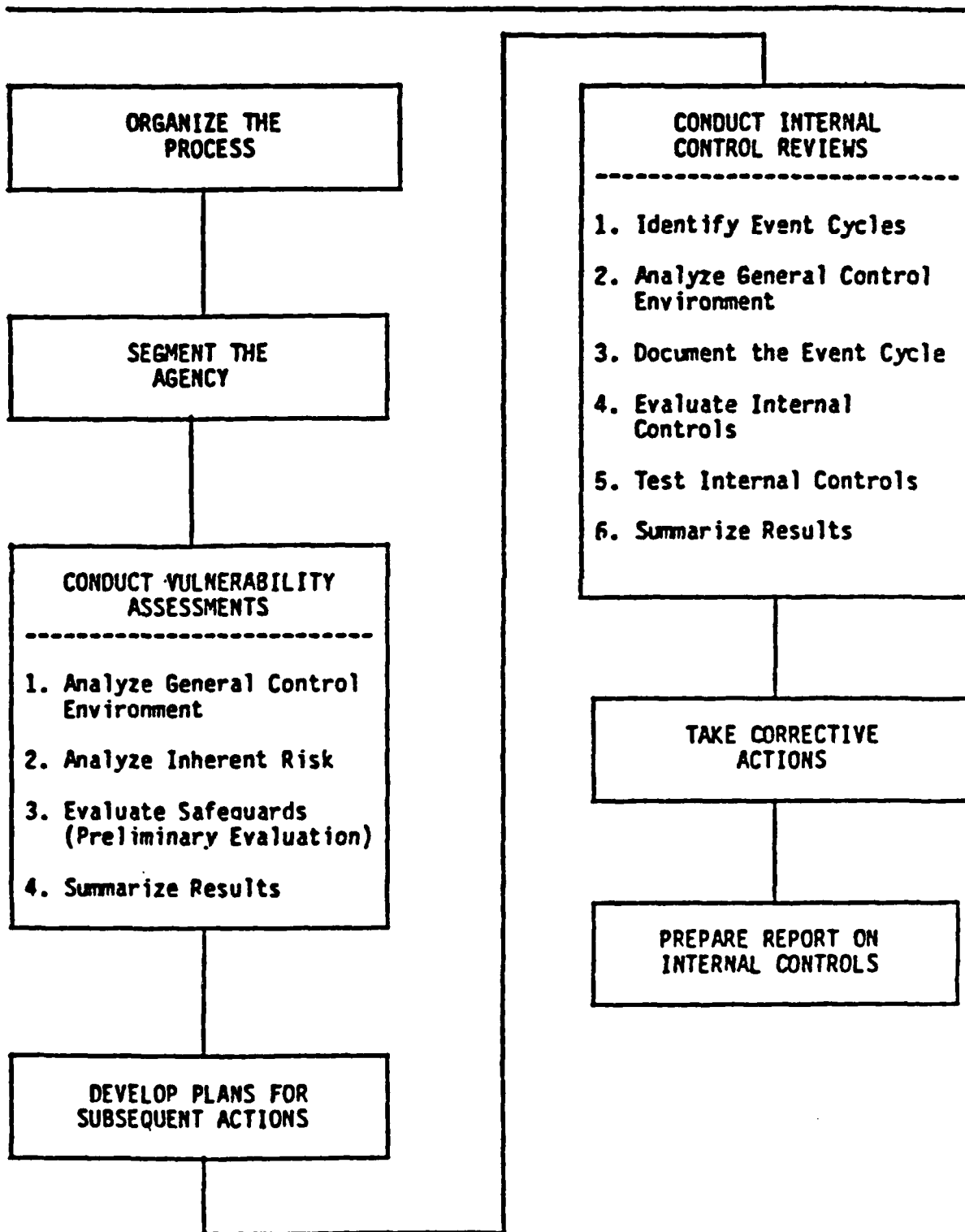
Assessable Unit: Planning and Resources Management

Assessable Sub Unit: Provide Management Analysis Services (Code 042)

Risk	Control Objective	Control Technique
1.a. Illegal or improper activities are carried out by the Code 042 organization or its personnel.	1. Management Analysis services provided by Code 042 meet the NAVFINCEN's legitimate* needs.  *lawful; conforming to recognized principles or accepted rules and standards.	1.a. Written work assignments are required for all management analysis services provided. Work Assignment must contain objectives to be attained, scope and approach to be applied, and milestones and target dates to be accomplished. Work Assignment must be approved in advance of the allocation of resources.  1.b. Approval of written work assignment is always accomplished at one management level above the management level responsible for allocating the resources.
2.a. Management Analysis services accomplish no useful purpose and result in waste of NAVFINCEN resources.	2. Management Analysis services are conducted in a manner that promotes economy and efficiency in the operations of the Management Planning Division.	2.a. Written work assignments must have quantifiable and measurable objectives, a statement of the scope of the assignment, the approach to be used to accomplish the assignment, and milestone/target dates to measure accomplishments.
2.b. Inefficient or ineffective operation of the Management Planning Division (042).		2.b. Performance Standards are used to measure attainment of work assignment objectives, adherence to scope and approach, and accomplishment of milestones and target dates.
3.a. Potential for fraud, waste, and abuse.	3. Safeguards exist to prevent unauthorized or wasteful use of Management Analysis services provided by Code 042.	3.a. Branch supervisors are required to develop and maintain Fiscal Year Work Plans which reflect proposed utilization of resources. Work Plans are based on written and approved work assignments.  3.b. Division Director must approve the Work Plans and modifications to them. Division Director must approve work assignments.  3.c. Performance Standards for Branch Chiefs measure effectiveness of the Work Plans.

Risk	Control Objective	Control Technique
4.a. Loss of experienced personnel.	4. Maintain low (15%) turnover rate.	4.a. Provide backup, understudy for major, important programs/projects.
4.b. Unable to accomplish mission.		4.b. Provide regular opportunity for promotion in career ladder.
5. Equipment/Services procured which are not needed.	5. Prevent Conflict of Interest in recommendations effecting procurement.	5.a. Required annual reading of Standards of Conduct.
6. Poor/unacceptable recommendations.	6. Maintain competency of staff.	5.b. Rotate personnel in programs.
		6.a. Define KSA's.
		6.b. Provide formal training in KSA's.
7. Improper methodology results in incorrect or invalid recommendations.	7. Ensure proper approach (methodology, techniques) are utilized to develop recommendations.	7. Prescribe approach in work assignments. Level of detail based on grade level of the analyst.

APPENDIX G  
**OVERVIEW OF THE INTERNAL CONTROL EVALUATION,  
IMPROVEMENT, AND REPORTING PROCESS**



**APPENDIX H**  
**EXECUTIVE SUMMARY**

Since the inception of officially recognized internal control systems, there has been difficulty in segregating and defining internal administrative controls from internal accounting controls. The overshadowing of administrative control has resulted at the outset from the independent auditing profession's insistence that the aggregate of administrative controls do not impact on the fair presentation of financial statements. This lack of concern for the administrative control process has carried over into the Federal Government until recent times.

The private sector auditors' thrust continues to be on internal accounting controls due to that sector's concern for the fair presentation of financial statements. The development of internal controls in the public sector is following the same course as the private sector. As a result, little attention is being directed toward the establishment and integration of internal administrative control programs. The public sector is attempting to fill the administrative control void solely by applying internal accounting control techniques to the totality of the internal control process.

The necessity for adequate internal administrative control programs is essential in light of increased competition for scarce resources and the need to optimize operational economy and efficiency and management effectiveness in achieving desired results. The size, complexity, and diversity of organizations require the development of controls to achieve these goals.

A lack of clear, current, and comprehensive information on the subject of internal control necessitates reliance on the basic definition of control -- comparing reality with a standard -- and on an understanding of its close relationship to planning, as points of departure for further comparative analysis and development of related control concepts. The study of this basic definition in an organizational context yields three underlying interdependent dimensions: organizational structure and design, human interactive behavior, and a continuum of formality. Additional analysis identifies the characteristic of time as yet another descriptor of control systems. Combinations of these dimensions in varying levels of importance and pervasiveness serve to distinguish the broad concept of management control from its subsets of administrative and operational control.

In the final analysis, management control is both a continuous and retrospective process which integrates structure, money, things and people in the efficient and effective accomplishment of organizational strategies and goals. Operational control tracks things and performance and is restricted to specific programmed activities capable of solution by a set of logical rules to assure individual transactions are executed efficiently and effectively. Administrative control evolves as the critical integrating "glue" of the organization that assists management in its role -- it is the formal design of the organization's structural framework and the predetermination of standardized decisions and actions which render organizational identity and purpose and assure economy, efficiency and effectiveness in operations.

The success of the organization hinges on the administrative control elements of organizational structure and design in integrating coordination, communication, and control. The effectiveness of this integration process is

directly related to the quality of interactions among the designers, managers, and employees, and the extent to which management understands and participates in its development.

The criteria for control depend on the size, dispersion, complexity, management philosophy, structure and grouping of an organization. Larger organizations require more detailed formal documentation and communication of policies, procedures, standards, and control systems for the effective and efficient achievement of control objectives. The development of control criteria can be based on their application to control system components or functional control objectives as deemed appropriate to the particular organization. Regardless of the approach, emphasis must be placed on the establishment of an environment that creates the appropriate control awareness, attitude and discipline. Paramount to success is the design of a control system (whether it be managerial, administrative, or operational) which fits the structure and management philosophy of the organization, which focuses on the areas of risk inherent to its goals and mission, and which strikes a balance between the costs and benefits of control.

A precursor to evaluation is a review of current administrative controls to gain an understanding of the control environment and the organization's mission and practices. In evaluating the effectiveness of an internal control system, the main thrust of testing should be directed to the execution of those procedures which are critical to meeting the organization's goals and objectives. Compliance tests are conducted to ensure that the control system is operating as intended and are most pertinent to the evaluation of administrative controls. These tests involve the examination of documentation, discussions with management and employees, and observation of the performance of duties. If the results of the compliance tests reveal that performance

and controls deviate from that which is desired, corrective action is required to modify controls in light of possible internal and external environmental changes, or to reemphasize prescribed procedures and heighten control awareness for greater assurance of compliance in the future.

The Marine Corps' definition of administrative control is an all encompassing definition which incorporates management control, administrative control, and operational control as it relates to people, structure, process and the breadth of focus in the organization. Administrative control, as developed in this thesis, is:

The process of designing the appropriate structure and specifying predetermined decisions or actions through which management assures that the organization carries out its goals and objectives efficiently and effectively.

Predetermined structure and process (what an organization is and what it does) are not new to the Marine Corps. All formal organizations possess mission statements and Tables of Organization (T/O's) which predetermine structure and provide an inherent element of administrative control. Due to the high degree of decentralization in the Marine Corps, standardization in the form of Commandant of the Marine Corps (CMC) White Letters, Standard Operating Procedures (SOP's), User Manuals, Policy Memorandums, Desktop Procedures, Turnover Files, Operations Plans and Orders, Command/Organization/Unit orders and directives, etc., provide additional administrative controls. MCO P5215.1F, The Marine Corps Directive System, requires the establishment of a minimum number of subordinate command directives to ensure consistency (control) with Headquarters guidance. Each of these directives should be localized to meet the organization's needs and to supplement the achievement of efficiency--maximum output from a given quantity of

input--and effectiveness--how well an organization does its job.

Predetermined structure and process suggest a somewhat static control environment, one that previously exists which requires little action from the command, management/ supervisory personnel responsible for the function. Nevertheless, predetermined structure and process is but one small portion of the overall dynamic management control system.

MCC 5600.31, Publication and Printing Regulations, provides for the review and subsequent certification that directives (administrative controls) are current and reflect the operations as actually performed in the organization. Additionally, the Marine Corps Manual, in paragraph 1011.3, provides that commanders shall "make or cause to be made such inspections as are necessary to evaluate all functional areas of their commands and to keep themselves informed, at all times, of the overall condition of their commands." Reviews, like inspections, cannot be conducted by seat-of-the pants analysis, but rather by ambulatory management with active participation by those directly and indirectly affected. The dynamics of this management control system encompass the entire organization and impact on the static nature of administrative control. In order to determine the effectiveness of the controls in a functional area, an evaluation (management control review) must be made to compare the performance of the individual tasks involved in the functional area, as well as the functional area in toto, with the predetermined standard. The evaluation should also consider the reliability of the standard.

There are many vehicles in the Marine Corps to assist commanders/managers/ supervisors in conducting evaluations. Field Supply and Maintenance Analysis Office checklists, Supply and Maintenance Assistance Office checklists

(internal to some commands), Inspector-General Marine Corps checklists, self-inspection program checklists, and Marine Corps Disbursing On-Site Examination Team (MCDOSSET) checklists are examples of the many that already exist which identify the critical areas for consideration within functions. The Naval Audit Service audit programs assist management in conducting reviews of their functional areas to evaluate established controls and areas where controls may be weak or missing.

Implementation of a Management Control Program as a post-facto concern to organizational development is no easy task. The Marine Corps Manual clearly points out that internal controls have always been part of a commander's responsibilities. The General Accounting Office (GAC) has published Standards for Internal Control in the Federal Government which define the minimum acceptable quality of internal control systems and provide criteria against which systems will be evaluated. These standards also can be considered techniques useful in developing a control program and evaluating administrative controls as well as the management control system.

As a result of significant research into the area of control, in general, the following conclusions relative to internal administrative control have been derived: first, administrative controls are those predetermined controls that give purpose, direction and meaning to the organization; second, administrative control applies to all levels of the organization, and management (at all levels) is responsible for the controls being in place and purposeful; and third, administrative controls are reflected in three dimensions in the organization; as organization controls defining structure and delineation of authority and responsibility; as operating controls providing process and procedures; and, as information system controls which tailor the system to promote effective decision-making.

Administrative controls have applicability to any organization that requires purpose, direction and meaning, but they cannot be static and be effective. As a result of environmental changes, personnel turnover, value changes, and goal redirection, administrative controls must be dynamic, thereby demanding constant review and update. The dynamics of administrative control preclude separation from management control, and, as a vital part of the organization, are intended to assist vice hamper management in the allocation of scarce resources.

The authors make the following recommendations for the implementation of effective administrative controls:

- (1) tours for commanding officers should be of sufficient duration to permit a more intimate knowledge of the requirements for organizational control and to permit the adaptation of the management information system to meet their needs;

- (2) top-level management must take a more active role in establishing a positive control environment, necessitating evaluations of both themselves and their subordinates relative to this responsibility;

- (3) managers at all levels must have increased input into the design of management information systems to provide them with feedback on the adequacy of their controls;

- (4) the management information system must have built-in flexibility to permit the tailoring of the system to meet changing management and environmental demands; and

- (5) courses of instruction for managers at all levels.

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